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BULLETIN OF ZOOLOGICAL NOMENCLATURE

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Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 51, part 4 (published on 20 December 1994). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Suchonella* Spizharsky, 1937 (Crustacea, Ostracoda): proposed designation of *S. typica* Spizharsky, 1939 as the type species. (Case 2954). I.G. Sohn & I.I. Molostovskaya.

(2) *Iodotropheus sprengerae* Oliver & Loiselle, 1972 (Osteichthyes, Perciformes): proposed replacement of holotype by a neotype. (Case 2955). J.R. Stauffer, Jr.

(3) *Campeloma* Rafinesque, 1819 (Mollusca, Gastropoda): proposed conservation. (Case 2956). A.E. Bogan & E.E. Spamer.

(4) *Phytobius* Schönherr, 1833 (Insecta, Coleoptera): proposed correction of entry on the Official List of Generic Names and confirmation of *Curculio quadrituberculatus* Fabricius, 1787 as the type species. (Case 2957). H. Silfverberg.

(5) *Corisa propinqua* Fieber, 1860 (currently *Glaenocorisa propinqua*; Insecta, Heteroptera): proposed conservation of the specific name. (Case 2958). A. Jansson.

(d) *Ruling of the Commission.* Each Opinion, Declaration or Direction published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin.*

The International Commission on Zoological Nomenclature and its publications

The International Commission on Zoological Nomenclature was established in 1895 by the Third International Congress of Zoology, and at present consists of 28 zoologists from 18 countries whose interests cover most of the principal divisions (including palaeontology) of the animal kingdom. The Commission is under the auspices of the International Union of Biological Sciences (IUBS), and members are elected by zoologists attending General Assemblies of IUBS or Congresses of its associated bodies. Casual vacancies may be filled between Congresses. Nominations for membership may be sent to the Commission Secretariat at any time.

The International Code of Zoological Nomenclature has one fundamental aim, which is to provide 'the maximum universality and continuity in the scientific names of animals compatible with the freedom of scientists to classify all animals according to taxonomic judgements'. The latest (Third) Edition was published in 1985 by the International Trust for Zoological Nomenclature, acting on behalf of the Commission. A Fourth Edition is in the course of preparation and all zoologists are invited to comment on a discussion draft.

Observance of the rules in the *Code* enables a biologist to arrive at the valid name for any animal taxon between and including the ranks of subspecies and superfamily. Its provisions can be waived or modified in their application to a particular case when strict adherence would cause confusion; however, this must never be done by an individual but only by the Commission, acting on behalf of all zoologists. The Commission takes such action in response to proposals submitted to it; applications should follow the instructions on the inside back cover of the *Bulletin*, and assistance will be given by the Secretariat.

The Bulletin of Zoological Nomenclature is published four times each year. It contains applications for Commission action, as described above; their publication is an invitation for any person to contribute comments or counter-suggestions, which may also be published. The Commission makes a ruling (called an Opinion) on a case only after a suitable period for comments. All Opinions are published in the *Bulletin*, which also contains articles and notes relevant to zoological nomenclature; such contributions may be sent to the Secretariat.

The Commission's rulings are summarised in *The Official Lists and Indexes of Names and Works in Zoology*; a single volume covering the period 1895–1985 was published in 1987, and a free supplement covering 1986–1990 was issued in 1991. Copies may be obtained from the Secretariat.

In addition to dealing with applications and other formal matters, the Commission's Secretariat is willing to help with advice on any question which may have nomenclatural (as distinct from purely taxonomic) implications.

The International Trust for Zoological Nomenclature is a charity (not-for-profit company) registered in the U.K. The Secretariat of the Commission is at present based in London, and the Trust is established there to handle the financial affairs of the Commission. The sale of publications (*Code*, *Bulletin* and *Official Lists and Indexes*) covers less than half of the costs of the service given to zoology by the Commission. Support is given by academies, research councils, associations and societies from a number of countries, and also by individuals, but despite this

assistance the level of income remains a severe restraint. Donations to the Trust are gratefully received and attention is drawn to the tax advantages of legacies.

For a more detailed discussion of the Commission and its activities see BZN **48**: 295–299 (December 1991). A Centenary History of the Commission is being published this year.

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Fourth Edition of the International Code of Zoological Nomenclature

Recent issues of the *Bulletin* have referred to the availability of a discussion draft of a new edition of the Code. However, the final stages of the preparation of this draft have been held up and it is still not available for distribution. As soon as the draft is ready copies will be sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution.

The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895; there are about 9900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France), Prof. A. Minelli (Italy) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

Proposed amendments to the Constitution of the International Commission on Zoological Nomenclature

Explanatory notes

The Commission is governed by a Constitution (see Article 76d of the *International Code of Zoological Nomenclature*) which can only be amended by the same procedure as the *Code* itself (see Article 82a). The present Constitution is published as Appendix F of the third (1985) edition of the *Code* (pp. 236-249). Article 16 of the Constitution provides that amendments to the *Code* (and hence to the Constitution also) can only be voted upon by the Commission if they have been published for at least one year and if comments made within that period have been considered by the Commission. The Commission is distributing a discussion draft of a proposed fourth edition of the *Code*. It is desirable that the new edition of the *Code* should contain a Constitution which includes features whose potential merits were not evident in the circumstances existing when the present text was formulated, in its essentials more than 20 years ago. Proposed amendments to the Constitution are put forward now so that the *Code* and Constitution can be considered together and be published in the same volume.

Since the Constitution is administrative rather than nomenclatural in character it is in the first instance a matter for the Council of the Commission rather than for the *Code* Editorial Committee. The proposed amendments were considered by the Council in June 1994. They include two substantial changes (in Articles 3 and 11) from the present Constitution, with which the present notes and proposals should be read.

The proposed Article 3b(i) provides that a Commissioner should not be eligible for re-election after serving for 18 continuous years, after which re-election would be possible only following an interval of three years (Article 3b(ii)). The object of this is to promote turnover of membership, and to counter a widely held belief that membership of the Commission is effectively life-long. Provision is made to avoid a Presidency being cut short, and in Article 3b(iii) to allow a particularly appropriate person to be elected or re-elected to serve as President. If these measures were to take full effect in 1997, the intended effective date of the new *Code*, a large number of vacancies would immediately result. The transitional provision in Article 3b(iv) means that no sudden disruption and loss of experience will be caused by introduction of the 18-year rule; however, a number of present Commissioners will reach the age limit (of 75 years) by 2002 and a considerable change of membership will result from this, in addition to the normal turnover.

The proposed changes in Article 4 are improvements in the procedure for election of Commissioners but involve no changes of principle. The changes in Articles 9 and 10 are likewise minor.

Article 11a removes the present obligation on the Commission to have a meeting at every IUBS General Assembly, but not its ability to do so. The present requirement was natural in the circumstances of the 1970's, when IUBS first succeeded the former International Congresses of Zoology as the Commission's supervisory body, but IUBS Assemblies can be very close in time to other Congresses (such as those of Evolutionary and Systematic Biology (ICSEB)) which are more widely attended by zoologists. A Commission meeting every third year (the interval

between IUBS Assemblies) may be unnecessary when a new *Code* is not being prepared. The proposed Article 11a(i) prescribes that a meeting must be held at least once in six years, but shorter intervals will probably be appropriate and apply in practice. The formal relationship between IUBS and the Commission is unaffected by the proposed Constitution amendments.

The suggested changes in Articles 12 and 14 are minor. The tenor of Article 15 is changed to reflect the proposed change in Article 11a(i), i.e. that meetings of the Commission will not necessarily be held at every IUBS General Assembly. The proposals in Articles 16 and 18 do not involve changes of principle.

Comments on the proposed amendments to the Constitution of the Commission are invited, and should be sent by March 1996 to the Executive Secretary (*c/o The Natural History Museum, Cromwell Road, London, SW7 5BD, U.K.*).

Proposed amendments (cf. pp. 236-249 of the Code)

Article 1. Status and Functions of the Commission. — [No changes proposed].
Article 2. Membership of the Commission. — [No changes proposed].
Article 3. Term of service of Members of the Commission. —
(a) **Normal term**. — The normal term of service of a member of the Commission shall be reckoned as follows:

(i) Members shall be grouped into classes according to the date of their election or most recent re-election. A class consists of the members elected at a particular session of the Section of Zoological Nomenclature of the International Union of Biological Sciences (IUBS) together with those elected at by-elections following that session but preceding the next;

(ii) within a class all members shall have equal seniority and, subject to Section (b), the term of their service ends at the close of the general session of the Commission (Article 11a of this Constitution) at which their class is the most senior.

(b) **Re-election**. — A member whose normal term of service terminates may be re-elected but:

(i) upon completing a continuous period of service of eighteen years (or, if the member is President of the Commission, twenty-four years) a person shall cease to be a member at the next close of a general session of the Commission;

(ii) on completion of the maximum period specified in Subsection (i) three years must elapse before a former member of the Commission is eligible for re-election;

(iii) Subsection (ii) shall not apply when a retiring or former member is pre-elected by the Commission to continue as or to become its President if re-elected as a member;

(iv) as a transitional arrangement, no service prior to 1 January 1985 shall be taken into account for the purposes of Subsection (i).

(c) **Prior termination of membership**. — The membership of any member of the Commission shall terminate:

(i) on the date of his or her 75th birthday;

(ii) on acceptance by the Council of notice of resignation tendered in writing to the Secretary;

(iii) if, not being on leave of absence, he or she fails on five consecutive occasions to record a vote on questions put to the Commission for decision, provided that within a period of three months following such failure no written explanation has been made which the Council finds adequate.

Article 4. Election of Members of the Commission. —

(a) **Notice.** – The Commission shall publish, not less than one year before a general session of the Commission (Article 11a), a notice which:

(i) gives the names, nationalities and fields of specialisation of the members whose terms of service will end at the close of that session;

(ii) quotes Article 2b of this Constitution and invites nominations for membership of the Commission;

(iii) gives a date, not less than three months before the forthcoming general session, by which nominations must be received.

(b) **Circulation.** — The notice specified in Section (a) shall be submitted to IUBS, to the organizers of the Congress where the general session is to be held, and to appropriate journals in different parts of the world, with a request for its dissemination.

(c) **Nominations.** — Nominations, accompanied by a statement of the fields of specialisation and qualifications under Article 2b of each nominee, are to be sent to the Secretary of the Commission. Unless the nomination contains the information, the Secretary shall request each nominee to give consent to the nomination and to provide a *curriculum vitae*, a list of publications, and a statement of his or her nomenclatural experience.

(d) **List of Candidates.** — The Commission shall at a general session:

(i) determine the number of places, which shall be not less than half the number of members retiring at the close of the session, to be filled by a ballot of the Section of Zoological Nomenclature of IUBS;

(ii) consider the nominations which have been made in accordance with Section (c) and prepare from them a list of twice as many candidates as the number of places to be filled by ballot in accordance with Subsection (i).

(e) **Election.** — The Commission shall present the list of candidates to the Section of Zoological Nomenclature of IUBS for an election by secret ballot.

(f) **By-elections.** – The Commission may by a postal ballot fill vacancies arising from prior terminations of membership (Article 3c) or which have not been filled by election at a session of the Section of Zoological Nomenclature of IUBS (Article 4d(i)).

[No changes are proposed in the following Articles]:

Article 5. Duties of Members of the Commission.

Article 6. Officers.

Article 7. Council.

Article 8. Election of Officers and members of Council.

Article 9. Secretariat. —

The Council may appoint an Executive Secretary for such a term and with such duties as may be fixed in the Bylaws; a member of the Commission may be appointed similarly as Secretary-General. The Executive Secretary may be an employee of an appropriate body, such as the International Trust for Zoological Nomenclature.

Article 10. Committees. —
(a) **Appointment and Functions.** —[No change proposed].
(b) **Submission of reports.** — Each *ad hoc* committee shall report to the Council at the time stated in the terms of its appointment or when called upon by the Council to do so. *Ad hoc* committees dissolve on submitting their final report or if they are previously terminated by the Council.
Article 11. Sessions. —
(a) **General Sessions.** —

(i) The President shall convene general sessions of the Commission at intervals not exceeding six years, to be held in conjunction with General Assemblies of IUBS, International Congresses of Systematic and Evolutionary Biology (ICSEB), or other international Congresses which are widely attended by zoologists.

(ii) A general session shall include a meeting for the preparation of a list of candidates for election to the Commission and the presentation of that list to a session of the Section of Zoological Nomenclature of IUBS for election by secret ballot (Article 4).

(iii) A general session may begin before and continue after the Congress with which it is associated, providing that all members of the Commission are notified in advance and that elections to the Commission are held only during the period of the Congress.

(b) **Special Sessions.** — [No change proposed].
Article 12. Voting. —
(a) **In ordinary cases.** — [No change proposed].
(b) **In cases involving the use of the plenary power or amendments to the Code or Constitution.** — In such cases (see Article 79 of the Code for the use of the plenary power and Article 16 of this Constitution for amendments to the Code or Constitution) an affirmative decision shall be deemed to have been taken only when two thirds of the votes validly cast in a postal vote lasting three months are in favour of the proposal, and provided that notice of the proposal had been published in the *Bulletin of Zoological Nomenclature* and submitted for publication to at least three appropriate journals at least six months (in the case of amendments to the Code or Constitution, twelve months) prior to the vote.
(c) and (d) **Conditional and negative votes.** — [To be deleted and incorporated into Bylaws].
Article 13. Financial arrangements. — [No change proposed].
Article 14. Editorial duties of the Commission. — [Delete 'Directions' from Section (a)].
Article 15. Emergency powers. — As a result of an emergency, the Council, or failing this, the President, may assume and exercise such extraordinary powers as it (or the President if relevant) may consider necessary to secure the continued function of the Commission, provided that:

(i) the powers shall cease as soon as the state of emergency permits;

(ii) they shall not include powers to vary the Code, or to issue Declarations or Opinions which have not been approved by the Commission;

(iii) they, the reasons for their assumption, and their duration, shall be reported to the Commission and to IUBS as soon as circumstances permit.

Article 16. Amendments to the Code and Constitution. — The Commission shall

(i) publish the proposed amendment (unless a minor amendment to the Code as therein defined in Article 77b) in accordance with Article 12b of this Constitution;

(ii) receive and consider comments from zoologists that are received within one year of the publication of the proposal;

(iii) vote on the proposal (which may be modified in the light of the received comments) in accordance with Article 12b;

(iv) publish its decision and if two thirds or more of the votes are in the affirmative, declare that the proposal has become incorporated into the Code or Constitution subject to ratification by IUBS.

(1) Provisional ratification of the proposed amendment may be sought from IUBS in advance of the Commission's vote, such ratification to become effective on the amendment's approval by the Commission under Article 12.

Article 17. Bylaws. — [No changes proposed].

Article 18. Inauguration. — This Constitution and all amendments to it shall take effect when it and they have been approved by the Commission and ratified by IUBS in accordance with Article 16.

The ambiregnal protists and the Codes of nomenclature: a brief review of the problem and of proposed solutions

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Abstract. Among the tens of thousands of species of protists recognized today, a goodly number are known as 'ambiregnal' because of their past treatment both as algae and as protozoa, which caused their names to fall under the jurisdiction of both the botanical and the zoological Codes of nomenclature. Now that many of them have been determined to be more closely related to one another than to members of the plant and animal kingdoms, a solution is needed to relieve their names of the highly undesirable situation of being subject to different treatment by different workers, as is possible under the existing Codes. Six proposed solutions of the complicated problem are examined, with one — harmonization of the relevant Codes — heralded as the most likely to meet the crying needs of the situation. In addition, a plea is made for recommendation in the Codes of guidelines useful in the cases of suprafamilial names of the many diverse high-level protistan assemblages.

The organisms widely known vernacularly as 'the protists' — roughly defined as including all of the protozoa, the eukaryotic algae, and the so-called 'lower fungi' (zoosporic and plasmodial species) — have become objects of intensive studies in recent years as they have been increasingly perceived not only as model cells but also as groups of great evolutionary significance in the origin of the 'higher' eukaryotes, the plants, animals, and fungi (for latest review, see Corliss, 1994a). While considerable attention has been paid to their ultrastructural, biochemical and molecular properties on the one hand, and to their phylogenetic interrelationships on the other, rather few biologists have expressed an interest in the nomenclatural problems arising from their high-level systematic separation from (most) plants and animals. That is, they can no longer be treated taxonomically as simply 'mini-plants' or 'mini-animals' (Corliss, 1983, 1986, 1994b).

Directly involved in their taxonomy and nomenclature, at the lower classification levels particularly, are the various Codes of nomenclature, which contain both mandatory and recommended provisions concerning family, generic and specific names of all living and fossil organisms. The two Codes of special concern to the topic under consideration are the *International Code of Botanical Nomenclature* (Greuter *et al.*, 1994) and the *International Code of Zoological Nomenclature* (International Commission on Zoological Nomenclature, 1985).

Because the great majority of species of protists are, by widespread general agreement, no longer formally assignable to the kingdoms of plants or animals, their nomenclature might be considered to fall under no existing Code. This would be an unacceptable vacuum. These microbial eukaryotes might be assigned to the jurisdiction of one or the other (or some combination of both) of the two major Codes named above, but this would create an almost equally unsatisfactory situation (see later sections of this paper). The problem is exacerbated by the fact that some 30,000

named species of protists, mostly single-celled, motile, microscopic forms with or without plastids, have been formally classified, simultaneously, as plants (algae or fungi) and as animals (protozoa). Thus, their nomenclature fell (or potentially fell) under two Codes at the same time.

The special category of 'lower' eukaryotes described immediately above has come to be known (adopting the apt term coined by Patterson, 1986) as the ambiregnal protists. The principal groups involved are: all the euglenids *sensu lato*, dinoflagellates, cryptomonads, haptophytes, and glaucophytes; many 'chromophytes' (or heterokonts), particularly those whose flagella bear tripartite hairs; some 'proteromonads'; scattered species among the 'chlorophytes' or green algae (e.g., Volvocales *sensu lato* and prasinophytes); and numerous plasmodial forms (the so-called myxomycetes/mycetozoa *sensu lato*) plus the chytrids — groups claimed by both mycologists and zoologists (or protistologists).

How can we resolve the unsettled and unsettling nomenclatural problems caused by the protist situation and especially by the existence of the ambiregnal forms, which involve some 15% or more of the estimated (Corliss, 1984) 200,000 species?

An understanding of the situation has to be the first step. Encouragingly, the very recent Report of an IUBS/IUMS committee on harmonization among Codes of nomenclature (Hawksworth *et al.*, 1994), published in this *Bulletin* (BZN **51**: 188–216) and concurrently as a Special Issue (number 30) of *Biology International*, has provided a detailed, informative background. It stresses potential resolution of current Code differences that are impeding pragmatic progress with respect to some dozen major issues, ambiregnal organisms prominent among them. That report (see also Hawksworth, 1991, 1992; Jeffrey, 1990; Ride, 1988; Ride & Younès, 1986) makes unnecessary my repetition of numerous facts. The interested reader is referred also to Corliss (1990, 1991, 1993) and Patterson & Larsen (1991, 1992) for recent papers approaching the problem solely from a protist perspective; they raise some aspects of the matter (see below) perhaps inadequately addressed by the Hawksworth committee.

Extent of the Overall Problem

It is not appreciated by many non-protistologically oriented biologists that the ambiregnal problem extends to suprafamilial taxonomic levels, as well as involving the lower — currently Code-regulated — categories. That there are inevitably some areas of overlap in proposed solutions with respect to these two categories complicates the situation.

Too little attention has been paid to the effect of (the necessity of) abandoning the single 'kingdom Protista' concept for the more supportable multiple eukaryotic kingdom hypothesis in which protistan groups are distributed among at least six separate kingdoms (see Cavalier-Smith, 1993; Corliss, 1994a, and references therein), three of which may be composed solely of protists. Such distribution of diverse algal, fungal, and protozoan taxa amongst different kingdoms and phyla precludes their convenient treatment as a single top-level assemblage (and therefore completely eliminates the notion of a separate Code for protists: Corliss, 1993). The concomitant shifting of species also confounds any simple Code-regulated solution at the lower taxonomic levels, often with respect to non-ambiregnal as well as ambiregnal species.

Anxious to have answers to the problems addressed in this paper are not only the practising taxonomists and nomenclaturists of the world but also general biologists, textbook writers, teachers, bench investigators using whole organisms or their cells, ecologists and evolutionary biologists, students of conservation and biodiversity, and also information retrieval specialists and culture collection and type specimen collection managers.

Consideration of Specific Solutions

The strengths and weaknesses of full or partial solutions proposed in the past, and of resolutions currently under study, need to be considered here, albeit very briefly, mostly to alert the reader to progress being made. The recent increase of interest in the problems spelled out above is encouraging; and the outlook for successful resolution of most, if not all, of them is now more optimistic than it has been for years.

1. Arbitrary Assignment of (Higher) Taxa to a Given Code

With the tacit recognition of the demise of the single kingdom Protista to embrace all protists (see especially Cavalier-Smith, 1993; Corliss, 1994a,b, 1995; Patterson, 1994), it becomes clear that the notion of 'one Kingdom, one Code' is not a feasible one, as discussed in some detail by Corliss (1993). But it is also true that a proposal by Cavalier-Smith (1981, 1993) and others — that members of a given kingdom be arbitrarily assigned to a given Code for nomenclatural purposes — is unwise, especially in view of the current instability of protistan highest-level taxa and their precise ranks (and names). Nor would improvement be obtained by having some international body make the arbitrary assignment, another idea which has been mentioned in the literature.

Nevertheless, there is logic in Cavalier-Smith's defense of his assignments: he places his most 'animal-like' (heterotrophic nutrition, presence of locomotory organelles, lack of cell walls, etc.) kingdoms (*viz.* the Archezoa, Protozoa, and Animalia) under jurisdiction of the Zoological Code, and his most 'plant-like' ones (*viz.* the Chromista, Fungi, and Plantae) under the Botanical Code. Unfortunately, admitted exceptions involving hundreds of species exist in each case. While I consider his proposal not satisfactory, it does or would solve most of the problems outlined on preceding pages and is worthy of consideration or at least citation (neither of which it has received to date in the growing literature on this subject). In many instances, his solution coincides with current and past nomenclatural practices (see below) with regard to numerous — but not all — ambiregnal species of protists; but these other solutions are, for the most part, also unsatisfactory.

2. Individual Author's Choice as to which Code to Use

Under this procedure, the individual taxonomist would simply choose to employ a particular Code. However, whatever he or she decided, the result would surely meet with opposition and disagreement by other specialists in the field (probably depending on their training, either as botanists or zoologists). Literature comparisons would be difficult and there would be confusion for retrieval systems. There is no way in which this idea can be considered as a proposal of much worth.

3. Publication of Both Nomenclatures for Ambiregnal Organisms

This procedure avoids the problem of upsetting most botanical or zoological users of a given taxonomic work. It has been favored by protistologists such as Patterson & Larsen (1991, 1992), who urge its adoption. But I consider it to be an unsatisfactory answer to the dilemma of ambiregnal (or other) protists because it really begs the question and postpones a solution. Also, requiring all investigators to be intimately familiar with traditional (and newer) systems of both botanical and zoological classifications for the microbial eukaryotes they may happen to be studying is patently unreasonable. Yet the proposal may be helpful in underscoring the problem confronting such workers, and it has already been put into operation by several conscientious groups (see, for example, Larsen & Patterson, 1990; Novarino & Lucas, 1993, 1995).

4. Piecemeal Repair of Codes on a Case-by-Case Basis

This has already been a policy of all commissions/committees involved in revising various of the Codes, and it is a laudable approach. Certain specific vexatious problems, or at least sub-problems, have been taken care of by such repair. Such solutions, however, represent only a 'first-aid' substitute for the major surgery required, and they are too cumbersome to take care of the major problems addressed here and in the report by the Hawksworth committee. Nevertheless, they might well be continued to advantage while international groups are debating methods by which more drastic revision may be made.

5. Establishment of a Single 'Ecumenical' Code of Nomenclature

Nearly the opposite of 'one Kingdom, one Code' is the idea of 'one Code, *all* Kingdoms', which would embrace even the prokaryotes and the viruses. This would appear to be a possible aim of the Hawksworth committee (Hawksworth *et al.*, 1994), although most of the emphasis in their enlightening report is on *harmonization* of the 'big five' existing Codes (which deal with plants, cultivated plants, bacteria, animals and viruses). While there are theoretical merits in a single Code for all contemporary and fossil life on Earth, many pragmatic reasons militate against its feasibility. Perhaps the greatest pitfall of all is the instant negative effect such a document would have on a multitude of nomenclatural decisions of past decades, even past centuries. Numerous changes in former names would inevitably be required in various groups, unless some very strong provision were included — a kind of 'grandfather clause' — which would exempt from change all the decisions made before a certain arbitrarily chosen date. Still, this would not solve many of our ambiregnal problems, such as homonyms, different starting dates and typification procedures, etc. And practising protist taxonomists would (once again!) be obliged to be familiar with relevant old Codes as well as the new one!

Amalgamation of all existing Codes into one does represent the utopian solution for the future unity of biological nomenclature; but surely it can be, at best, only a very long-range goal.

6. Relinquishing the (Nearly) Absolute Independence of the Codes

Put more positively, this can be rephrased as harmonization of the existing Codes, an excellent solution to the ambiregnal and other nomenclatural problems of such

concern to the taxonomic and general biological communities today. This is the topic to which the IUBS/IUMS 'exploratory meeting' addressed itself. In my view, finding ways of bringing the Codes into harmony with respect to the various controversial issues in need of solution does not necessarily mean that a single new Code must be the eventual result. Some time-honored provisions probably could be preserved without causing grave conflicts in their application; others could be protected by the 'grandfather clause' technique. Often, altered or entirely new Articles in the Codes (e.g., along the lines of proposals in Taylor *et al.*, 1986, 1987) could suffice to demonstrate a kind of joint jurisdiction over the nomenclature of taxa of protists. With respect to our ambiregnal species, only the two major current eukaryotic Codes need to be so standardized.

Solving all of our problems by this approach will require a lot of time and co-operation and perhaps compromise, a good deal of dedicated work on the part of a number of people, and certainly considerable funding. Organizers of the present Codes have very limited fiscal resources available to them, a block that will need to be overcome.

7. Guidelines concerning the Names of Suprafamilial Taxa

Harmonization of existing Codes will do little to ease the problem, which particularly involves protists, of nomenclatural practice for names of the highest ranking taxa (orders up through at least kingdoms). Under the impact of molecular studies on the phylogenetics of organisms — and particularly if workers hold strictly to monophyletic principles — we may some day have nearly as many kingdoms as we have phyla today! Ultrastructural, biochemical and ribosomal-RNA sequencing studies are revealing that the protists show a far greater diversity — morphologically, physiologically and genetically — than all the rest of the eukaryotic groups put together (Andersen, 1992; Cavalier-Smith, 1993; Corliss, 1994a; Margulis *et al.*, 1990; Patterson, 1994; Schlegel, 1991). The number of kingdoms (six) of eukaryotes endorsed by me (e.g. in Corliss, 1994a) is a rather conservative one indeed.

Problems here include choices of the names for the high taxa mentioned above, dates of origins and authorships, handling of emended names, matters of prefixes and suffixes, priorities, rejections, nomenclatural effects of splits and consolidations or of changes in level/rank of taxa, etc.

Is there any way to avoid the 'undisciplined proliferation' of high-level names, a phenomenon so decried by Patterson & Larsen (1991)? The rash of name-giving to newly created suprafamilial taxa of protists, so prevalent in the 1970s and 1980s, was — particularly in hindsight — deplorable; and it certainly did not serve to endear nomenclatural taxonomists to the general biological community (Corliss, 1993). But it could happen again, if monophyletic lineages only partially identifiable with classical taxa are all given fresh labels in the shape of new formal names (Patterson, 1994).

Therefore, as I have been suggesting for a number of years (see earlier references in Corliss, 1993), future editions of the Codes should contain at least some *recommended guidelines* concerning nomenclature of suprafamilial taxa, not only of protists but of all organisms. Along with approved Lists of (names of) organisms (a proposal moving forward positively: see Hawksworth *et al.*, 1994), such an action would go a long way towards stabilization of nomenclature at levels not presently

covered by the Codes. As always, however, there must be no infringement upon the taxonomic freedom of the individual investigator.

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Case 2901

Stictostroma Parks, 1936 (Porifera, Stromatoporoidea): proposed conservation, and designation of *S. gorriense* Stearn, 1995 as the type species

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Abstract. The purpose of this application is to conserve the name of the Devonian stromatoporoid genus *Stictostroma* Parks, 1936 as it is currently used. The name is unavailable from 1936 because the first valid type species designation was by Galloway & St. Jean (1957) of *Stromatopora mammillata* Nicholson, 1873 (a junior homonym that they renamed *Stictostroma mamilliferum*). However, the specimens they used to characterize this species (*Stromatopora mammillata* = *Stictostroma mamilliferum*) were not compared with the diagnostic internal structure of Nicholson's type specimen. As a result both Parks and Galloway & St. Jean misidentified as *Stictostroma mamilliferum* a new taxonomic species named *Stictostroma gorriense* by Stearn (1995), whose holotype is one of the specimens used by Parks in establishing the genus *Stictostroma*. It is proposed that the name *Stictostroma* be taken as available from Parks (1936) and that *S. gorriense* be designated the type species.

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1. Parks (1936, p. 77) proposed the name *Stictostroma* for 'certain species [of stromatoporoid] that seem to be intermediate between *Clathrodictyon* and *Stromatoporella*'. He wrote '... it is impossible to select a genotype. Cogenotypes might be named — *S. mammillata* [*Stromatopora mammillata* Nicholson, 1873 (p. 94)] characterized by laminae porous in structure but without hollow points [now called ring pillars], and *S. eriense* [sp. nov., p. 81] with non-porous laminae inflated to form hollow points [ring pillars]'. He recognized the unconventional nature of his action, writing 'this procedure may not be in accord with the best system of nomenclature'.

2. Lecompte (1951, p. 137) objected that the genus was invalid under the Code because it was proposed with two type species. Article 13b of the present Code requires that, to be available, a genus-group name published after 1930 must 'be accompanied by the fixation of the type species by original designation or by indication'. Parks had not validly designated a type species.

3. Galloway & St. Jean (1957, p. 124) designated *Stromatopora mammillata* Nicholson as the type species. They noted that this name was a junior primary homonym of *Stromatopora mammillata* Schmidt, 1858 and resolved the problem of homonymy by renaming Nicholson's species *Stictostroma mamilliferum* (p. 125). This specific name has subsequently been misspelled '*mammilliferum*' by St. Jean (1962, pp. 187, 195) and Fagerstrom (1977, p. 416). In choosing one of Parks's proposed 'cogenotypes', Galloway & St. Jean assigned the other, *S. eriense*, to *Stromatoporella*

Nicholson, 1886 and redefined the genus *Stictostroma* to exclude species with ring pillars. The name is now used by all palaeontologists in the sense of Galloway & St. Jean's revision (for example, Galloway & Ehlers, 1960; St. Jean, 1962; Stearn & Mehrotra, 1970; Kazmierczak, 1971; Khromych, 1974; Stearn, 1975; Fagerstrom, 1982). A review of the literature (Stearn, 1995) shows that about 32 described species can be assigned to the genus as redefined.

4. Parks's (1936) original and Galloway & St. Jean's (1957) revised concepts of *Stictostroma* were not based on a knowledge of the internal structure of the type specimens of *Stromatopora mammillata* (= *Stictostroma mamilliferum*) from Port Colborne, Ontario, as the type specimens in the Nicholson Collection had never been cut into thin sections (as noted previously by Whiteaves, 1898, p. 368). They were based on material collected by Parks from Ashton's quarry near the village of Gorrie, Ontario, about 100 km northwest of Port Colborne. Parks identified these as *S. mammillata* Nicholson on the basis of resemblance of the growth surfaces alone. Parks's genus, in both original concept and revision, had come to be based on a type species whose diagnostic internal structure was unknown.

5. Fagerstrom (1977, p. 417) examined the types of *Stromatopora mammillata* (= *Stictostroma mamilliferum*) and confirmed that they had not been cut, polished or sectioned. The Nicholson Collection at the Natural History Museum, London, includes two specimens in lot P5766 identified in Nicholson's hand as the type specimens of *Stromatopora mammillata*. They appear to be fragments of the same skeleton. Thin sections cut across the smaller specimen (P5766B), studied by me and designated as the lectotype (Stearn, 1995, p. 23), show a very thin crust with steepsided mamelons and only vague traces of internal structure visible through a pervasive silicification. The Nicholson Collection includes also two paralectotype lots: P5764 (a single specimen labelled also as 'type specimens') and P5765 (five small fragments of a silicified crust). These are described and illustrated by Stearn (1995). The original specimens of the type species selected by Galloway & St. Jean do not show the features considered by Parks and Galloway & St. Jean as diagnostic of the genus, and show very few internal features at all.

6. The specimen (Royal Ontario Museum 9360, Parks's number 1551) Parks illustrated (1936, pl. 14, figs. 3–6) as '*Stictostroma mammillata* (Nicholson)' shows the internal features of *Stictostroma* clearly. Parks's specimens differ from Nicholson's types in sufficient features to indicate that they are not conspecific, and possibly not congeneric. They therefore require a new name and have been called *Stictostroma gorriense* by Stearn (1995, p. 26). The holotype is Parks's specimen 1551 (ROM 9360) in the Royal Ontario Museum from Gorrie, Ontario, illustrated by Parks (1936, pl. 14, figs. 3–6) and by Stearn (1995, figs. 1.6, 1.7, 2.5, 2.6).

7. Because the name *Stictostroma* is invariably attributed to Parks (1936), although it was not made formally available until the designation by Galloway & St. Jean (1957) of a type species, to attribute it to Galloway & St. Jean would be contrary to usage. The genus was based on Parks's specimens now named *Stictostroma gorriense* Stearn, 1995.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:

(a) to rule that the generic name *Stictostroma* Parks, 1936 is available although

no type species of the nominal genus was validly fixed with the original publication of the name;

(b) to set aside all previous fixations of the type species for the nominal genus *Stictostroma* Parks, 1936 and to designate *Stictostroma gorriense* Stearn, 1995 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Stictostroma* Parks, 1936 (gender: neuter), type species by designation in (1)(b) above *Stictostroma gorriense* Stearn, 1995;

(3) to place on the Official List of Specific Names in Zoology the name *gorriense* Stearn, 1995, as published in the binomen *Stictostroma gorriense* (specific name of the type species of *Stictostroma* Parks, 1936).

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Case 2949

Aplysia juliana Quoy & Gaimard, 1832 (Mollusca, Gastropoda): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the specific name of *Aplysia juliana* Quoy & Gaimard, 1832 for a sea hare (Opisthobranchia, Anaspidea) found worldwide on rocky shores in warm waters. The name is threatened by the unused senior subjective synonym *A. sorex* Rang, 1828.

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1. Rang (1828, p. 57) described the species *Aplysia sorex* on the basis of a single specimen collected in the Pacific by Lesson during the voyage of the *Coquille*. Rang did not know the exact locality where the specimen had been found but he noted that it came from the shores of some Oceania islands. He illustrated (pl. 10, figs. 4–8) a small (50 mm) specimen with a broad foot and parapodial lobes joined high up posteriorly, coloured dark green with several black spots. The internal shell showed an anal sinus which was not deep. Nothing was said about the internal anatomy of the specimen. Subsequently Lesson (1830, p. 294) recorded that the specimen came from Oualan (the most eastern of the Caroline islands).

2. Quoy & Gaimard (1832, p. 309) described *Aplysia juliana* from two specimens in alcohol, caught off Mauritius in the Indian Ocean during the voyage of the *Astrolabe*. The taxon was characterised by a rounded disk ('un écusson bien arrondi') in the posterior end of the foot. The authors illustrated the species (pl. 24, figs. 5, 6) to show an animal dark green in colour, with the body surface smooth, and the parapodial lobes short and joined high up posteriorly. They also figured a narrow shell with a wide but not deep anal sinus.

3. Pruvot-Fol (1933, p. 400) established *Tullia* as a new genus, or a subgenus of *Aplysia*, based on the single species *A. juliana* Quoy & Gaimard, 1832. *Tullia* was characterised by a distinct sucker in the posterior edge of the foot and a simple radular morphology. In a subsequent review of the genus *Aplysia*, Eales (1960) considered that the characteristics of the subgenus *Tullia* were also present in the type species of the genus, *A. depilans* Gmelin, 1791 (see Opinion 200, January 1954 for the authorship and date of this name), and in the nominate subgenus, and that *Tullia* was thus not a valid subgenus. She included *A. juliana* in the subgenus *Aplysia*.

4. Engel & Eales (1957) reviewed the species of *Aplysia* belonging to the subgenus *Tullia*, as then conceived. They agreed with the observations on living specimens of *A. juliana* made by Macnae (1955), who recorded that movement was either by gliding or 'in the fashion of a looper caterpillar', that the posterior sucking disk was visible only when the animal was 'looping', and that the disk was not a permanent feature but was distinct in preserved specimens only when the posterior pedal glands had been actively secreting and the animal had been clinging with the hind part of the

foot at the time of preservation. Engel & Eales (1957) examined the type material (of which only one of the two original specimens could be found) of *A. juliana* deposited in the Muséum National d'Histoire Naturelle in Paris. They also examined several specimens, both in the Paris museum and in the Natural History Museum in London from the Atlantic, Pacific and Indian oceans, identified by Pruvot-Fol as *A. sorex*, and found that almost all the specimens were juveniles of *A. juliana*. They were doubtful of the identity only in the case of a few Moroccan specimens in Paris lacking a disk on the tail that Pruvot-Fol (1953, pp. 33–36, fig. 7, pl. 3, fig. 44) had identified as *A. sorex* and which, from the radular morphology figured by her, are probably identifiable as *A. depilans* Gmelin, 1791. Two further juvenile specimens in London from Las Palmas (Canary Islands), previously labelled by Eales as *A. sorex*, were identified by Engel & Eales (1957) as *A. juliana*, although they noted that the radular denticulations on all the teeth were better developed that in *A. juliana* adults. We have examined these two specimens and found that they also belong to *A. depilans*.

5. Engel & Eales (1957) also studied another specimen caught during the voyage of the *Coquille*, deposited in the Muséum National d'Histoire Naturelle and labelled as '*A. sorex*, Océanie, Lesson et Garnot, type'. This specimen differed from Rang's (1828) original description and illustration in that the foot had a distinct posterior disk. Engel & Eales identified the specimen as *A. juliana*. There was no evidence that this was, indeed, the original specimen described by Rang, and Engel & Eales (1957, p. 96) therefore noted: 'It is better to add *A. sorex* Rang, 1828 with doubt to the synonyms of *A. juliana*. This has the advantage that we need not consider the problem that *A. sorex* Rang, 1828 is the older name and would have priority over *A. juliana* Quoy & Gaimard, 1832 if the type of *A. sorex* could be identified with certainty as that species. If, later on, this ever might prove true, it is desirable to ask the International Commission on Zoological Nomenclature for a decision suppressing *A. sorex* Rang, 1828'. We ourselves have tried to find Rang's (1828) original specimen of *A. sorex* in the Muséum National d'Histoire Naturelle without success and have concluded that it is untraceable.

6. Acceptance of *sorex* Rang, 1828 as the valid specific name of *Aplysia juliana* Quoy & Gaimard, 1832 would incur many problems since the name *juliana* has been widely used in a great variety of papers concerning not only taxonomy (Marcus & Marcus, 1957; Kay, 1964; Marcus, 1972, 1977; Bebbington, 1974, 1977, 1982; Martínez & Ortea, 1994) but also ecology (Carefoot, 1987), larval development (Switzer-Dunlap & Hadfield, 1977), recruitment (Sarver, 1979) and growth (Usuki, 1970, 1981), among others. A representative list of a further 19 references, dating from 1957 to 1994 and involving more than 20 additional authors, is held by the Commission Secretariat. The name *A. sorex* has remained unused, other than by Pruvot-Fol (1953, p. 34), who noted 'Cette espèce, non revue je crois depuis Rang'. In the absence of type material it is unlikely that *A. sorex* could ever be used and we therefore propose that it be suppressed.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *sorex* Rang, 1828, as published in the binomen *Aplysia sorex*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *juliana* Quoy & Gaimard, 1832, as published in the binomen *Aplysia juliana*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *sorex* Rang, 1828, as published in the binomen *Aplysia sorex* and as suppressed in (1) above.

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Case 2922

Octopus vulgaris Cuvier, [1797] and *Loligo vulgaris* Lamarck, 1798 (Mollusca, Cephalopoda): proposed conservation of the specific names

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Abstract. The purpose of this application is to conserve the specific names of both the common octopus *Octopus vulgaris* Cuvier, [1797] and the common squid *Loligo vulgaris* Lamarck, 1798. The names of these economically important species are threatened by senior subjective synonyms unused in the past century, *Sepia octopodia* Linnaeus, 1758 and *S. octopus* Gmelin, [1791] (octopus) and *S. loligo* Linnaeus, 1758 (squid).

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1. The common octopus was described and named by Linnaeus (1758, p. 658) as *Sepia octopodia*. Schneider (1784, p. 116) used the binomen *Octopodia polypus* for the species but both his generic and specific names were suppressed by the Commission in Opinion 233 (April 1954). The same species was described as *Sepia octopus* by Gmelin ([1791], p. 3149).

2. Cuvier ([1797], p. 380) described the genus *Octopus*, cited *Sepia octopus* and proposed the replacement name *Octopus vulgare* [sic], presumably to avoid tautonymy. Opinion 233 (p. 278) gave the type species of *Octopus* Cuvier, [1797] 'by Linnean tautonymy (Opinion 16)' as *Octopus vulgaris* (correction of *vulgare*) Cuvier, [1797]. The reference to Linnean tautonymy is incorrect (cf. Article 69e(i) of the Code). This Opinion overlooked a prior designation of type species by Gray (1847, p. 205) who listed *Sepia octopus* as the type species for *Octopus* Cuvier, [1797]. Also, the senior synonyms *Sepia octopodia* Linnaeus, 1758 and *S. octopus* Gmelin, [1791] were not suppressed in the Opinion. Before 1920 the name *Polypus* Schneider, 1784 (p. 116) was sometimes used instead of *Octopus*. *Polypus*, like Schneider's name *Loligo* (see para. 5 below), was rejected in Opinion 233 as being a specific name.

3. According to priority the name for the common octopus should therefore be *Octopus octopodia* (Linnaeus, 1758), a binomen unused for over a century.

4. The common squid was described by Linnaeus (1758, p. 659) as *Sepia loligo*; the type species of *Sepia* is *S. officinalis* Linnaeus, 1758 (the common cuttlefish).

5. Lamarck (1798) described the genus *Loligo* and included (p. 130) *Loligo vulgaris* as the name for the common squid. The name '*Loligo*' has been ascribed to Schneider (1784, p. 110) but he used the name for a species only and '*Loligo*' Schneider, 1784 was rejected by the Commission in Opinion 233. The type species of

Loligo is *L. vulgaris* Lamarck, 1798 by subsequent designation by Children (1823, p. 167).

6. The name for the common squid should therefore be *Loligo loligo* (Linnaeus, 1758) but this binomen has never been used.

7. Since Cuvier's ([1797]) and Lamarck's (1798) descriptions the names *Octopus vulgaris* and *Loligo vulgaris* have been established in a vast literature on the common octopus and common squid respectively; a list of over 40 references for usage of each specific name is held by the Commission Secretariat. To adopt the usage of the senior subjective synonyms *octopodia* Linnaeus, 1758 or *octopus* Gmelin, [1791] for the octopus, or *loligo* Linnaeus, 1758 for the squid, would cause severe confusion and disruption to the nomenclature of these common and economically very important species.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *octopodia* Linnaeus, 1758, as published in the binomen *Sepia octopodia*;
   (b) *octopus* Gmelin, [1791], as published in the binomen *Sepia octopus*;
   (c) *loligo* Linnaeus, 1758, as published in the binomen *Sepia loligo*;

(2) to place on the Official List of Generic Names in Zoology the name *Loligo* Lamarck, 1798 (gender: masculine), type species *Loligo vulgaris* Lamarck, 1798 by subsequent designation by Children (1823);

(3) to amend the entry for *Octopus* Cuvier, [1797] on the Official List of Generic Names in Zoology to record that the type species is *Sepia octopus* Gmelin, [1791] (suppressed senior objective synonym of *Octopus vulgaris* Cuvier, [1797]) by subsequent designation by Gray (1847);

(4) to place on the Official List of Specific Names in Zoology the name *vulgaris* Lamarck, 1798, as published in the binomen *Loligo vulgaris* (specific name of the type species of *Loligo* Lamarck, 1798);

(5) to amend the entry for *Octopus vulgaris* Cuvier, [1797] on the Official List of Specific Names in Zoology to record that *vulgaris* Cuvier, [1797] is the valid junior objective synonym of *Sepia octopus* Gmelin, [1791], the type species of *Octopus* Cuvier, [1797];

(6) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
   (a) *octopodia* Linnaeus, 1758, as published in the binomen *Sepia octopodia* and as suppressed in (1)(a) above;
   (b) *octopus* Gmelin, [1791], as published in the binomen *Sepia octopus* and as suppressed in (1)(b) above;
   (c) *loligo* Linnaeus, 1758, as published in the binomen *Sepia loligo* and as suppressed in (1)(c) above.

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Case 2899

Dodecaceria concharum Örsted, 1843 and *Heterocirrus fimbriatus* Verrill, 1879 (currently *D. fimbriata*) (Annelida, Polychaeta): proposed conservation of the specific names by the designation of a neotype for *D. concharum*

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Abstract. The purpose of this application is to conserve, by designation of a neotype for *Dodecaceria concharum* Örsted, 1843, the general usage of this name for a parthenogenetic species, and of *D. fimbriata* (Verrill, 1879) for a sexually and asexually reproducing species, of cirratulid polychaetes from Europe. There is circumstantial evidence that Örsted's original material may have been *D. fimbriata* but it is proposed that a neotype for *D. concharum* be designated in accord with usage. *D. concharum* is the type species of *Dodecaceria* Örsted, 1843 by monotypy.

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1. *Dodecaceria* Örsted, 1843 (p. 44) is a worldwide genus of tube-dwelling cirratulid polychaetes. In the north-east Atlantic the two species discussed here live in flask-shaped tubes in shallow water, often forming dense colonies in calcareous substrates such as the encrusting alga *Lithothamnion* or the shells of bivalve molluscs. Örsted described the nominal species *D. concharum* on the basis of specimens found in 'wormed' shells taken from oyster beds on the Danish side of the Öresund, between Fredrickshavn and Skagen and near Hellebæk. He failed to describe a pair of tentacles ventral to the first pair of branchial cirri and did not indicate either the presence or absence of eyes or nuchal organs. Nevertheless, Örsted's original description and figure were such that later authors felt able to use his specific name even though the type material is not extant (Wolff & Petersen, 1991, p. 672).

2. *Terebella ostreae* Dalyell, 1853 (p. 209, pl. 26, fig. 10) was also described from old oyster shells. No type locality is mentioned but Dalyell's specimens, which included both adults and juveniles, were very probably from the Firth of Forth, Scotland. Johnston (1865, p. 212) synonymized this taxon with *D. concharum* Örsted, 1843 and recorded specimens from Berwick Bay and Falmouth, England. This synonymy was accepted by subsequent authors, including McIntosh (1915), Fauvel (1927) and Hartman (1959). However, further work by Gibson (in press) on the northern distribution of the two species in relation to the salinity suggests that Dalyell's species was more probably *D. fimbriata*. *Terebella ostreae* is best regarded as a nomen dubium but is a threat to the stability of *D. fimbriata*; we therefore propose that it be suppressed.

3. *Heterocirrus* Grube, 1855 was established for a single species *Heterocirrus saxicola* Grube, 1855 (p. 109, pl. 4, fig. 11) described from Villafranca (i.e. Villefranche, France). Grube noted that the tentacles each bear a ciliated groove and occur on the buccal segment together with the first pair of branchial cirri. Quatrefages (1865, pp. 454, 464–467), misled by the supposed absence of tentacles in *Dodecaceria* (but not in *Heterocirrus*), kept the two genera separate. *Dodecaceria* remained monotypic for *D. concharum*, but in *Heterocirrus* Quatrefages included not only *H. saxicola* Grube, 1855 but also *H. frontifilis* Grube, 1863 and *H. multibranchis* Grube, 1863 and a new species *H. ater*. One of the characters claimed by Quatrefages to distinguish *Dodecaceria* from *Heterocirrus* was the presence of eyes in the latter genus, although he thought they might be absent from the type species *H. saxicola*. In fact the two rows of minute 'eyes', which he described for *H. ater*, are the nuchal organs.

4. Marion & Bobretzky (1875, p. 67) synonymized *H. saxicola* Grube, 1855 with *D. concharum* Örsted, 1843. This synonymy has been confirmed by one of us (P.H.G.), who examined Grube's specimens from Villefranche, assumed to be the type material of *H. saxicola* (1 specimen + fragment: catalogue no. Q.4559, Zoologisches Museum, Berlin). *H. ater* was synonymized with *D. concharum* by Langerhans (1881, p. 96).

5. Saint-Joseph (1894, pp. 42–58), in a revision of cirratulid genera, accepted the heterogenous nature of *Heterocirrus* sensu Quatrefages. He excluded both *H. saxicola*, although this was the type species, and *H. ater*, and redefined the genus to accommodate *H. multibranchis* and seven other species. *Heterocirrus* was maintained as a genus distinct from *Dodecaceria* by several subsequent authors (e.g. McIntosh, 1915 and Fauvel, 1927) but, as it was originally established as a monotypic genus for *H. saxicola*, it can only be a junior subjective synonym of *Dodecaceria*. The generic name *Heterocirrus* is not now in use, although Cabioch, L'Hardy & Rullier (1968) used that name for three species of *Caulleriella*. The species of *Heterocirrus* sensu Saint-Joseph are now placed in *Aphelochaeta* Blake, 1991 (= *Tharyx* auctt., non Webster & Benedict, 1887) and *Caulleriella* Chamberlin, 1919.

6. The abundant populations of *D. concharum* from the extensive *Lithothamnion* biotope on the French coast of the English Channel in the region of La Hague, near Cherbourg, were investigated by Caullery & Mesnil (1898). They concluded that the species was heteromorphic, with three separate and independent series of individuals, each with a different reproductive strategy. These series were termed forms A, B and C. Form A was the commonest, representing about 90% of the individuals studied. All specimens of form A were female. This form did not appear to undergo metamorphosis and was assumed to remain a sedentary atoke throughout its life. Reproduction was parthenogenetic and viviparous. Sexually reproductive adults of form B were free-swimming epitokes (B_2) with equal numbers of males and females, but for form C only one large epitoke (C_2) was found. The atokes of these forms and their characteristic chaetae were described, with figures of those of A, B_1 and B_2. All individuals of form C were females but were not viviparous. After discussing whether these forms should be assigned to more than one species, Caullery & Mesnil concluded that only one polymorphic species should be recognized.

7. McIntosh (1911) observed in the Channel Islands two forms, referred to as *D. concharum* and *D. ater*, which he distinguished by the size and shape of their

posterior chaetae. He was, in fact, confusing juvenile and adult individuals of *D. concharum*, although specimens of Caullery & Mesnil's form B must also have been present, as McIntosh referred to a large epitokous male. McIntosh (1915) added to this confusion by placing *D. concharum* and *H. ater* in different genera. He included *H. saxicola* in the synonymy of *D. concharum*, but for *H. ater* also he stated: 'The *H. saxatilis* [sic] of Grube ... may be the same or an allied form'. His uncertainty about the distinction between *D. concharum* and *H. ater* is further illustrated by his citation of *Nereis sextentaculata* (delle Chiaje, 1822) in the synonymy of both, but this earlier name was not adopted for either. Although McIntosh cited different figures in each case (pl. 43, fig. 16 of delle Chiaje's (1822) *Memorie* for *D. concharum*, and pl. 105, fig. 16 of delle Chiaje's (1841) *Descrizione* for *H. ater*), these two figures are actually the identical illustration. The identity of delle Chiaje's species is discussed below (para. 11).

8. Dehorne (1933) studied the reproductive biology of form B of Caullery & Mesnil (1898) from Le Portel, Boulogne, France. He found it to reproduce asexually as an atoke and sexually as an epitoke. Dehorne commented that Caullery & Mesnil, although reluctant to treat their forms A, B and C as three separate species, had admitted that form B should perhaps be considered distinct, as it had distinct morphological characters, separate male and female adults, and parasites not found in forms A and C. After giving further details of taxonomic characters distinguishing the two species (i.e. form B and forms A+C, on the assumption that form C 'serait le véritable état terminal de A'), Dehorne discussed their taxonomy. The original descriptions of *Dodecaceria concharum* and *Heterocirrus ater* enabled both, he believed, to be recognized as form A, and for that species Dehorne used the name *D. concharum* on the basis of priority.

9. Caullery & Mesnil (1898) had noted the similarity between form B and the West Atlantic species of *Dodecaceria*, described as *Heterocirrus fimbriatus* by Verrill (1879, p. 177) from off Campo Bello Island, Bay of Fundy, Canada, burrowing in dead shells of *Pecten tenuicostatus* (= *Placopecten magellanicus* (Gmelin, 1791)) at a depth of 110 metres. Caullery subsequently examined living, fixed and sectioned material of *D. fimbriata* and thought that it differed from European examples of form B. Dehorne (1933), relying on that opinion, proposed the name *D. caulleryi* for the specimens of form B from Boulogne. Although Dehorne's type material was destroyed during the Second World War, there is no doubt about its identity. The segregation of *D. caulleryi* from *D. concharum* effectively defined *D. concharum*, and these names have been in general use since that time. The findings of Caullery & Mesnil and Dehorne were confirmed and added to by Gibson & Clark (1976) and Gibson (1977, 1978, 1981), who showed that *D. concharum* is a single parthenogenetic species which reproduces annually and, if individuals live long enough, becomes epitokous. Its diploid chromosome number is 6, compared with 12 for *D. caulleryi* (= *D. fimbriata*, see para. 10 below). Trochophore larvae from eggs spawned into the tube of *D. concharum*, reared in an aquarium, developed into young atokes of the adult. These observations showed unquestionably that the two taxa are not forms of the same species.

10. Gibson (1979) compared *D. caulleryi* from Cullercoats Bay, Northumberland, England, and from Cap Gris-Nez, France (near Dehorne's type locality for *D. caulleryi* at Le Portel), with *D. fimbriata* from the east coast of North America and

considered them synonymous. Verrill's (1879, p. 178) original description was for the epitoke. Gibson examined this specimen together with an atoke Verrill had from the same Canadian locality, and compared the reproductive cycles of individuals from Cullercoats and Cap Gris-Nez with data gathered by Martin (1934) from the east coast of North America. Asexual regenerates of *D. fimbriata*, described in detail (as *D. caulleryi*) by Dehorne (1933) and Gibson & Clark (1976), have elsewhere been interpreted as species of CTENODRILIDAE. *Ctenodrilus monostylos* Zeppelin, 1883 and *Zeppelina mediopigmentata* Gillandt, 1979 were shown by George & Petersen (1991) to be based on such developmental stages.

11. Delle Chiaje (1822, pl. 43, fig. 16; 1828, p. 176) first described *Nereis sextentaculata* from crevices and holes on the shore near Naples, Italy. The cephalic region bore six 'tentacles' on each side ('tentaculis sex unoquoque latere'). In 1841 (p. 97) delle Chiaje provided a very similar description in Italian, but transferred the species to *Lycastis*. Plate 43 of 1822 was reissued as pl. 105 of the 1841 work. The name *N. sextentaculata* may be a senior synonym of either *D. concharum* or *D. fimbriata*, both of which are likely to occur at Naples, but the brief and inadequate description makes its identity uncertain. McIntosh (1915) cited it as a synonym of both *D. concharum* and *H. ater* (see para. 7 above), but did not adopt it. Fauvel (1927) included it as a very doubtful synonym of *D. concharum* agg., while Hartman (1959) placed it merely as a possible syllid or cirratulid. The name is not in use but should be suppressed as a potential threat to later names.

12. As *D. concharum* and *D. fimbriata* (or *D. caulleryi*) are morphologically similar they are frequently both recorded in faunal studies under the aggregate name *D. concharum*, but both species are listed separately (using the name *D. caulleryi*) in the marine faunas of Plymouth (Marine Biological Association, 1957), Roscoff (Cabioch, L'Hardy & Rullier, 1968), the Cullercoats district (Garwood, 1982) and the *Directory of the British marine fauna and flora* (Howson, 1987). The geographical distribution of the two species suggests that *D. concharum* does not occur where the salinity is reduced to below about 34 parts per thousand. High precipitation in northern Norway reduces the salinity of fjords, and the outflow of the Baltic affects the Kattegat, Skagerrak and its approaches. At 20 sites along the west coasts of Sweden and Norway, the east and west coasts of Denmark and the west coast of Germany, 216 specimens of *Dodecaceria* collected were all *D. fimbriata* (Gibson, in press). Both species are found along the coasts of the English Channel, but along the western coast of Scotland *D. concharum* seems to be found only on islands, and not in lochs where again high precipitation reduces salinity. There is a possibility that the early developmental stages, rather than the adults, are sensitive to reduced salinity. Many of the coelomic trochophore larvae in specimens from the Channel were found by Marcel (1963) to be abnormal. The ability of *D. fimbriata* to reproduce asexually may allow that species to penetrate less saline waters.

13. The only species of *Dodecaceria* now found in the Öresund, at the Danish type locality for *D. concharum*, is *D. fimbriata*. In the absence of type material of *D. concharum*, and considering the geographical distribution of the two species, the assumption must be that Örsted was in fact describing the species now known as *D. fimbriata* when he proposed the name *D. concharum*. Consequently, George & Petersen (1991) proposed that the name *D. concharum* Örsted be used for the species generally known as *D. fimbriata* (or *D. caulleryi*), and that *D. ater* (Quatrefages, 1865)

be resurrected as the oldest available name for the parthenogenetic species, *D. concharum* of authors. They cited *Terebella ostreae* Dalyell, 1853 as a synonym of *D. concharum* Örsted, 1843, i.e. *D. fimbriata* auctt., but gave no evidence to support this interpretation of a name which has (see para. 2 above) always been accepted as a synonym of *D. concharum* auctt. *Terebella ostreae* and *Heterocirrus saxicola* (which George & Petersen admit is 'very similar to *D. ater* and may prove to be identical with it'), are both senior to *D. ater* and would in any case threaten the valid usage of that name. If generally adopted, the transfer by George & Petersen of the name *D. concharum* to the species known as *D. fimbriata* (or *D. caulleryi*), and their use of the name *D. ater* for the species known for more than a century as *D. concharum* Örsted, 1843, would lead to serious confusion. Petersen & George (1991, p. 200) have already used the name *D. concharum* when referring to previous work on *D. caulleryi*. Such name changes complicate the already difficult separation of these two species.

14. In the absence of extant type material and because of the probability that the species as generally interpreted does not occur at the published type locality, we propose that the current usage of the name *Dodecaceria concharum* be maintained in the interests of nomenclatural stability by the designation of a neotype. The proposed neotype, deposited in the National Museums of Scotland, Edinburgh (catalogue no. NMSZ 1993063), is from Cullercoats, Northumberland, England, collected by P.H. Gibson on 9 December 1969. The name *D. fimbriata* (Verrill, 1879) will also be conserved by this action. We propose that the specific name of *Nereis sextentaculata* delle Chiaje, 1822 be suppressed, since it may threaten both *concharum* and *fimbriata* (see para. 11 above), and that the specific name of *Terebella ostreae* Dalyell, 1853 be suppressed as it may threaten *fimbriata* (see para. 2 above). We also propose that the specific names of *Heterocirrus saxicola* Grube, 1855 and *H. ater* Quatrefages, 1865 be suppressed; we believe these names to be synonymous with *concharum* but this is only subjective. If they are synonymous with *fimbriata* instead they are both senior to that name and could potentially upset stability. George & Petersen admit that *saxicola* and *ater* may prove to be identical and, on present evidence, if our application is not approved, *saxicola* (not *ater*) would be the oldest name for *concharum* of authors.

15. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
  (a) to set aside all previous type fixations for the nominal species *Dodecaceria concharum* Örsted, 1843 and to designate as neotype the specimen proposed in para. 14 above;
  (b) to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
    (i) *sextentaculata* delle Chiaje, 1822, as published in the binomen *Nereis sextentaculata*;
    (ii) *ostreae* Dalyell, 1853, as published in the binomen *Terebella ostreae*;
    (iii) *saxicola* Grube, 1855, as published in the binomen *Heterocirrus saxicola*;
    (iv) *ater* Quatrefages, 1865, as published in the binomen *Heterocirrus ater*;
(2) to place on the Official List of Generic Names in Zoology the name *Dodecaceria* Örsted, 1843 (gender: feminine), type species by monotypy *Dodecaceria concharum* Örsted, 1843;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *concharum* Örsted, 1843, as published in the binomen *Dodecaceria concharum* (specific name of the type species of *Dodecaceria* Örsted, 1843), and as defined by the neotype designated in (1)(a) above;
   (b) *fimbriatus* Verrill, 1879, as published in the binomen *Heterocirrus fimbriatus*;

(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
   (a) *sextentaculata* delle Chiaje, 1822, as published in the binomen *Nereis sextentaculata* and as suppressed in (1)(b)(i) above;
   (b) *ostreae* Dalyell, 1853, as published in the binomen *Terebella ostreae* and as suppressed in (1)(b)(ii) above;
   (c) *saxicola* Grube, 1855, as published in the binomen *Heterocirrus saxicola* and as suppressed in (1)(b)(iii) above;
   (d) *ater* Quatrefages, 1865, as published in the binomen *Heterocirrus ater* and as suppressed in (1)(b)(iv) above.

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Case 2944

Eophacops Delo, 1935 and *Acernaspis* Campbell, 1967 (Trilobita): proposed conservation

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Abstract. The purpose of this application is to conserve the names *Eophacops* Delo, 1935 and *Acernaspis* Campbell, 1967 for two genera of Silurian phacopid trilobites. Wedekind (1912) established the nominal genus *Pterygometopidella* with the nominal species *Phacops quadrilineatus* Angelin, [1851] as its type. The specimens on which Wedekind based his new genus were misidentified and are now assigned to *Eophacops*. *Phacops quadrilineatus* Angelin is now attributed to *Acernaspis*, which is therefore formally a junior subjective synonym of *Pterygometopidella*. *Eophacops* and *Acernaspis* are both in wide use, but *Pterygometopidella* is essentially unused and its suppression is proposed to conserve the two junior generic names.

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1. Wedekind (1912, p. 324, pl. 15, fig. 9) established the nominal genus *Pterygometopidella* for two specimens from Gotland which had been identified by Gustaf Lindström as *Phacops quadrilineatus* Angelin, [1851]. These two specimens were in the collections of the University of Göttingen, but cannot be traced and may have been lost in the Second World War (Dr H. Jähnke, pers. comm. to R.M.O., November 1976).

2. Angelin ([1851], p. 12, pl. 9, figs. 5a-c) had based his species *Phacops 4-lineata* [recte *4-lineatus*] on material, now lost, from the Silurian of Gotland. In his review of the Gotland phacopids, Ramsköld (1985, p. 5, pl. 1, figs. 1a-f) proposed and illustrated a neotype for *Phacops quadrilineatus* and assigned it to *Acernaspis* Campbell, 1967 (p. 32), the type species of which is *Phacops orestes* Billings, 1860 (p. 65) by monotypy and original designation. Ramsköld overlooked the fact that *P. quadrilineatus* is the type species of the senior genus *Pterygometopidella*.

3. Schrank (1972, p. 50) argued that the specimen figured by Wedekind (1912) might not belong to Angelin's species *Phacops quadrilineatus*. Schrank (1972, pl. 15, figs. 3, 3a) figured a third specimen, in the collections of the Naturkunde Museum, Humboldt University, Berlin, which had been identified by Lindström in 1874 as belonging to *P. quadrilineatus*. This specimen is very similar to the one figured by Wedekind, and there is no doubt that it belongs to the genus *Eophacops* Delo, 1935, possibly to *E. sprogensis* Ramsköld, 1985 (p. 30). Chlupáč (1977, p. 126) was also of the opinion that Wedekind's (1912) figures suggested identity of *Pterygometopidella* with *Eophacops*.

4. Although Wedekind's original illustration is small and poor, the outline of the glabella and other cephalic characters compare closely with *Eophacops* species, but are quite different from the equivalent features developed in the neotype of *A. quadrilineatus*. It is therefore evident that Lindström's identification as *Phacops quadrilineatus* of the two specimens on which Wedekind based *Pterygometopidella* was wrong, and that Wedekind established *Pterygometopidella* for specimens corresponding to *Eophacops* (see Clarkson, Eldredge & Henry, 1977, p. 122). *Eophacops* is therefore taxonomically (though not formally; see para. 5 below) a junior subjective synonym of *Pterygometopidella*.

5. *Eophacops* was established by Delo (1935, p. 405). It is a well-established genus of the PHACOPIDAE whose type species (*Phacops handwerki* Weller, 1907, p. 271) is well known, the type material being in the Walker Museum of the University of Chicago (now in the Field Museum of Natural History). The generic name *Eophacops* has been used in almost all recent relevant publications (e.g., Campbell, 1975; Holloway, 1980; Ramsköld & Werdelin, 1991; the Commission Secretariat holds a list of seven further papers by nine different authors over the last 33 years). By contrast, *Pterygometopidella* has remained obscure. It was listed under PHACOPIDAE 'subfamily uncertain' by Struve in the *Treatise on Invertebrate Paleontology* (Moore, 1959, p. O 468) and was not illustrated. So far as we are aware, the name *Pterygometopidella* has never been used, except by Schrank (1972, p. 50), by Shergold & Shirley (1968, p. 125) in a faunal list, in discussion by Chlupáč (1977, p. 126) and in comparative remarks by Männil (1970, pp. 344, 345, 347) who demurred from using this genus in favour of *Acernaspis* because of its uncertain status and insufficiently known diagnostic characters. We agree with Holloway (1980, p. 62) and Ramsköld (1985, p. 21) that it is in the interests of stability that *Pterygometopidella* should be suppressed to conserve the usage of *Eophacops*.

6. *Phacops quadrilineatus* Angelin is assigned to *Acernaspis* Campbell (see para. 2 above). The nominal genus *Acernaspis* is in current use (e.g. Clarkson, Eldredge & Henry, 1977; Howells, 1982; Ramsköld, 1985; Zhang & Meng, 1986; Lespérance, 1988). *Acernaspis* is formally a junior synonym of *Pterygometopidella* since Wedekind fixed the nominal species *Phacops quadrilineatus* (although misidentified) as the type species of *Pterygometopidella*. Suppression of the name *Pterygometopidella* would have the effect of conserving *Acernaspis* in addition to *Eophacops*.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the generic name *Pterygometopidella* Wedekind, 1912 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Eophacops* Delo, 1935 (gender: masculine), type species by original designation *Phacops handwerki* Weller, 1907;
   (b) *Acernaspis* Campbell, 1967 (gender: feminine), type species by original designation *Phacops orestes* Billings, 1860;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *handwerki* Weller, 1907, as published in the binomen *Phacops handwerki* (specific name of the type species of *Eophacops* Delo, 1935);

(b) *orestes* Billings, 1860, as published in the binomen *Phacops orestes* (specific name of the type species of *Acernaspis* Campbell, 1967);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Pterygometopidella* Wedekind, 1912, as suppressed in (1) above.

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Case 2914

Diplocentrus mexicanus Peters, 1861 (Arachnida, Scorpiones): proposed confirmation of the rediscovered holotype as the name-bearing type

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Abstract. The purpose of this application is to reinstate the rediscovered holotype as the name-bearing type of *Diplocentrus mexicanus* Peters, 1861, a species of scorpion from the states of Mexico and Oaxaca in Mexico (family DIPLOCENTRIDAE Pocock, 1893). The original material had been presumed lost and a neotype designated; the holotype and neotype are now found to belong to different subspecies. *D. mexicanus* is the type species by monotypy of *Diplocentrus* Peters, 1861. The genus *Diplocentrus* includes 30 species distributed from southeastern United States throughout Mexico to Belize, Guatemala and Honduras.

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1. Peters (1861, p. 512) described *Diplocentrus mexicanus* on the basis of a single female specimen from 'Mexico' (region unstated) deposited in the collection of the Zoologisches Museum, Humboldt-Universität zu Berlin (catalog no. ZMB 74). The species is the type by monotypy of *Diplocentrus* Peters, 1861, which was not described separately from the species. Karsch (1879, pp. 98–99) discussed the species and placed in the genus *Scorpio whitei* Gervais, 1844, which he considered a senior synonym of *mexicanus*. After a careful study Karsch (1880, pp. 407–408) concluded that both were valid taxa, although *whitei* continued to be cited for many years as the valid name for the type species of *Diplocentrus*. Stahnke (1976, p. 58) and Francke (1977, pp. 145–146) provided further evidence that the two species were distinct. *Diplocentrus* is the type genus of the family DIPLOCENTRIDAE Pocock, 1893.

2. In the early 1960s the late Prof H.L. Stahnke of Arizona State University visited a number of European museums and borrowed the types of most of the described North American scorpions, including the type of *Diplocentrus mexicanus* from Berlin. There was, however, no record that a loan of the type had been made. In the early to mid-1970s Oscar Francke began his work on *Diplocentrus* as a graduate student at Arizona State University under M. Cazier, and by 1975 had published a paper on the genus. Francke planned the necessary redescription of *D. mexicanus* as part of a large study on Mexican *Diplocentrus* and requested a loan of the holotype from Dr M. Moritz, the curator in Berlin. Dr Moritz, who had not been employed at the museum in the 1960s, replied that the type could not be found, that there was no evidence that it was on loan, and that it was presumably lost or destroyed in World War II, as were a number of other types. He later published that the type was not in the museum (Moritz & Fischer, 1980, p. 319).

3. Stahnke (1976, pp. 58–59) published photographs and descriptive notes on the holotype of *Diplocentrus mexicanus*. Unaware of this paper (which must have been in

press) and of Stahnke's possession of the holotype, Francke (1977, pp. 152–164, figs. 1, 9, 17, 27–32) redescribed and illustrated *D. mexicanus* and designated a male neotype from 'Mexico' (exact locality unknown) housed in the Zoologisches Institut und Zoologisches Museum der Hamburg Universität, Hamburg. The species was poorly understood and designation of the neotype was justified; the designation satisfied the requirements of Article 75 of the Code. In addition, Francke recognized two subspecies of *mexicanus*: the nominate based on the Hamburg neotype and a female specimen in the Natural History Museum in London, and *D. mexicanus oaxacae* based on a male holotype and found from several localities in central Oaxaca state.

4. In 1986 I examined the presumed holotype of *D. mexicanus* from the Zoologisches Museum in Berlin, bearing catalog no. ZMB 74. The specimen in the vial was clearly not the holotype but a specimen probably inadvertently switched by Stahnke and sent to Berlin in 1984. The holotype was eventually found among the H.L. Stahnke collection in the California Academy of Sciences, San Francisco, by Mr Vincent Lee (personal communication, November 1991). Examination of this specimen has confirmed that it is indeed the holotype, bearing the characters given by Peters (1861) and Karsch (1879, 1880), and depicted in Stahnke's (1976) photographs. It has now been returned to Berlin.

5. The refound holotype of *D. mexicanus* and the neotype of *D. mexicanus mexicanus* designated by Francke (1977) do not belong to the same subspecies. The holotype is consubspecific with Francke's *D. mexicanus oaxacae*, whilst his neotype is a separate subspecies, based on the characters used by him to define subspecific taxa. I have discussed this problem with my colleagues Drs David Richman and G.B. Edwards and it is our collective opinion that the holotype should be reinstated as the name-bearing specimen. The name *D. mexicanus oaxacae* will become a junior subjective synonym of *D. mexicanus mexicanus* and the subspecies represented by Francke's neotype will require a new name. Francke and I have written a paper renaming the subspecies; we will wait until the Commission has made a ruling before submitting the manuscript for publication. Francke's (1977) division of *mexicanus* into subspecies has been mentioned only once (briefly, by myself) since its original proposal (Sissom, 1991, pp. 123–124).

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to confirm as the name-bearing type for *Diplocentrus mexicanus* Peters, 1861 the rediscovered holotype;

(2) to place on the Official List of Generic Names in Zoology the name *Diplocentrus* Peters, 1861 (gender: masculine), type species by monotypy *Diplocentrus mexicanus* Peters, 1861;

(3) to place on the Official List of Specific Names in Zoology the name *mexicanus* Peters, 1861, as published in the binomen *Diplocentrus mexicanus* and as defined by the holotype (female specimen no. ZMB 74 in the Zoologisches Museum, Humboldt-Universität zu Berlin) confirmed in (1) above.

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Case 2941

Nepa rustica Fabricius, 1781 and *Zaitha stollii* Amyot & Serville, 1843 (currently *Diplonychus rusticus* and *Belostoma stollii*; Insecta, Heteroptera): proposed conservation of the specific names

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Abstract. The purpose of this application is to conserve the specific names of *Diplonychus rusticus* (Fabricius, 1781) from Asia and *Belostoma stollii* (Amyot & Serville, 1843) from the New World. In 1775 Fabricius had applied the name *Nepa rustica* to what was probably *B. stollii*, but in 1781 he changed the description and provenance and used *N. rustica* for the Asian species. It is proposed that the 1775 use of *N. rustica* be suppressed.

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1. Fabricius (1775, p. 691) described *Nepa rustica* as follows (translated from Latin): 'N[epa] without tail, body fuscous, unspotted. Inhabits waters in America, common. Similar to preceding but three times smaller. Body entirely fuscous, unspotted, smooth, only femora slightly yellowish'. The preceding species is *N. grandis* Linnaeus, 1758 (now in *Lethocerus*); this measures 90–95 mm in length so the length of *N. rustica* was 30 mm or slightly more. Fabricius did not indicate the collection in which the material was kept, and no type specimens are known. The description fits well several species of the American genus *Belostoma* Latreille, 1807.

2. In the next published reference to *N. rustica* Fabricius (1781, p. 333) gave a reference to his 1775 work, but he changed both the diagnosis and the distribution. He stated that the apex of the head, sides and hind margin of the pronotum and the sides of the hemelytra were pale. He omitted comparison with *N. grandis* and indicated that the species was smaller than any other. He stated that the species was from India ('Habitat in Coromandel. *Mus. Dom. Banks*'). In later works Fabricius (1787, p. 276; 1794, p. 62; 1803, p. 106) repeated in the main his 1781 text, but he did not further cite his 1775 work (an omission also applying to other species described in 1775). The description of *N. rustica* in 1781 and later years fits well the Oriental species now known as *Diplonychus rusticus* (Fabricius). The specimens on which the 1781 description was based, which are listed as type specimens by Zimsen (1964, p. 304), are in the Fabricius collection in the University Zoological Museum, Copenhagen (two specimens) and the Banks Collection at the Natural History Museum, London (two specimens, not one as indicated by Zimsen). They have been examined by one of us (J.T.P.) and belong to the species currently called *Diplonychus rusticus*.

3. Sulzer (1776, p. 92, pl. 10, fig. 2) described and figured a new species *Nepa plana* 'aus Amerika'. His description and figure do not resemble any known American species but closely match *D. rusticus*. Fabricius (1787, p. 276; 1794, p. 62; 1803, p. 106) synonymized *N. plana* with his own *N. rustica* as that was described in 1781.

4. Goeze (1778, p. 177) cited in part Fabricius' original (1775) description of *N. rustica* and added a vernacular name, 'Der Amerikanische Bauer'. Stoll (1780, p. 11, pl. 1, fig. 1) described and figured a belostomatid from Surinam under the name 'Le Paysan Americaine', with a reference to Fabricius (1775). Many years later Amyot & Serville (1843, p. 40), with a reference to Stoll, described a species from 'Cayenne' as *Zaitha stollii*; it is now known as *Belostoma stollii*.

5. Laporte (1833, p. 18) established the genus *Diplonychus* with '*Belostoma rustica* Fab. 106.3' (i.e. *Nepa rustica* of Fabricius (1803, p. 106), where *rustica* was used in the 1781 sense) as the type species by monotypy. On p. 88 of his work, published later the same year (see Harris, 1942), Laporte explained that he used the name *rustica* for the species so called in the later works of Fabricius, whereas the insect described by Fabricius (1775) and by Stoll (1780; see previous para.) as *N. rustica* belonged to another genus, i.e. *Belostoma*. The same observation was published by Herrich-Schaeffer (1849, p. 35) in the synonymy of *Zaitha stollii* Amyot & Serville: '*Nepa rustica*. — F. Syst. Entom. pg. 691 [the 1775 sense], non Ent. Syst. [the 1781 sense]'. Walker (1873, pp. 177, 182) also pointed out that Fabricius had described two species under the name *N. rustica*.

6. To the best of our knowledge, with the exception of Goeze (1778; see para. 4 above) the specific name *rustica* Fabricius has never been applied to an American species, but it has consistently and for more than 200 years been used for the Oriental species known as *Diplonychus rusticus*. We have about 130 references for the use of the name *rusticus* Fabricius for the *Diplonychus* species, 44 of them from the last 50 years (we have given a list of 30 references to the Commission Secretariat). The species is very common in India, and the subject of publications in ecology (Dudgeon, 1990), morphology (Cobben, 1968; Goel, 1972) and biological control of mosquitoes (Raut, 1988; Raut, Saha & Mukhopadhyay, 1988).

7. According to the principle of priority the specific name *rustica* Fabricius, 1775 should be applied to an American *Belostoma* species. This could be *B. stollii* (Amyot & Serville, 1843; see para. 4 above), which has been associated with the name and with which the brief description of Fabricius (1775) is in accord; on the other hand the description fits several species and there is no type material. If the name were applied to an American belostomatid all uses of *rusticus* for the Indian species would become misidentifications; the valid specific name for the latter would be *planus* Sulzer, 1776 (see para. 3 above), even though Sulzer had wrongly given the habitat as 'Amerika' and his name has never been used for any taxon. *Diplonychus* Laporte, 1833 is based on the Indian species (see para. 5 above), although at the time of establishing the genus Laporte failed to say explicitly that he was not using *Nepa rustica* Fabricius in the original sense.

8. The American species has consistently been known as *Belostoma stollii* (Amyot & Serville, 1843); we have given the Commission Secretariat a list of seven references to illustrate this.

9. It is desirable to retain the accepted usage of the name *Diplonychus rusticus* (Fabricius). Since the species was described in 1781 this date should be adopted,

rather than 1775 when *rustica* was used for an American *Belostoma*. One of the specimens in the Banks Collection in London (see para. 2 above) is proposed (Polhemus, 1994, p. 692) as the lectotype of *Nepa rustica* Fabricius, 1781, and it will be so labelled if the present application is approved. Since *Nepa plana* Sulzer, 1776 is an unused senior subjective synonym it should be suppressed. The specific name of *Belostoma stollii* (Amyot & Serville, 1843) will be conserved if *N. rustica* Fabricius, 1775 is suppressed.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
  (a) to suppress the specific name *rustica* Fabricius, 1775, as published in the binomen *Nepa rustica*, and all uses of that name prior to the publication of *Nepa rustica* Fabricius, 1781, for the purposes of both the Principle of Priority and the Principle of Homonymy;
  (b) to suppress the specific name *plana* Sulzer, 1776, as published in the binomen *Nepa plana*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
(2) to confirm that the type species of *Diplonychus* Laporte, 1843 is *Nepa rustica* Fabricius, 1781 by monotypy;
(3) to place on the Official List of Generic Names in Zoology the name *Diplonychus* Laporte, 1833 (gender: masculine), type species by monotypy *Nepa rustica* Fabricius, 1781, as confirmed in (2) above;
(4) to place on the Official List of Specific Names in Zoology the following names:
  (a) *rustica* Fabricius, 1781, as published in the binomen *Nepa rustica* and as defined by the lectotype proposed by Polhemus (1994) (specific name of the type species of *Diplonychus* Laporte, 1833);
  (b) *stollii* Amyot & Serville, 1843, as published in the binomen *Zaitha stollii*;
(5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
  (a) *rustica* Fabricius, 1775, as published in the binomen *Nepa rustica* and as suppressed in (1)(a) above;
  (b) *plana* Sulzer, 1776, as published in the binomen *Nepa plana* and as suppressed in (1)(b) above.

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Case 2918

Aspidiphorus Ziegler in Dejean, 1821 (Insecta, Coleoptera): proposed conservation as the correct original spelling, and ASPIDIPHORIDAE Kiesenwetter, 1877 (1859): proposed placement on the Official List

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Abstract. The purpose of this application is to conserve the universally accepted spelling *Aspidiphorus* Ziegler in Dejean, 1821 for a genus of 12 nominal species of small beetles which feed on slime moulds and have a broad distribution in the Old World. It is also proposed that the name ASPIDIPHORIDAE Kiesenwetter, 1877 (1859) should be placed on the Official List as the valid name for the family group that includes both *Aspidiphorus* and *Sphindus* Megerle in Dejean, 1821.

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1. In the 1821 edition of his catalog, Dejean included two new genera with authorship attributed as follows: *Arpidiphorus* Ziegler (p. 47) and *Sphindus* Megerle (p. 102). He placed the single nominal species *Nitidula orbiculata* Gyllenhal, 1808 (p. 242) in *Arpidiphorus*, and included *N. dubia* Gyllenhal, 1808 (p. 243) as the only species in *Sphindus*. Dejean cited '*Sphindus gyllenhali* Dej.' in conjunction with *dubia*. It is not clear whether *gyllenhali* was a manuscript name of Dejean's or an unnecessary replacement name for *dubia*; it has not been used again. *Nitidula orbiculata* and *N. dubia* are the type species by monotypy of *Arpidiphorus* and *Sphindus* respectively. The two new genera were unaccompanied by any description, diagnosis or illustration, but the requirements of availability under Article 12b(5) of the Code are met because the included nominal species can be identified by the citation of their authors.

2. Sturm (1826, pp. 16, 98) used the spelling *Aspidiphorus* for *Arpidiphorus*, attributing the genus to Ziegler and including *Nitidula orbiculata* Gyllenhal. Latreille (1829, p. 508) also used *Aspidiphorus*, attributed to Ziegler and Dejean. He included *N. orbiculata* and placed the genus in his suprageneric group 'Dermestes'.

3. The original name *Arpidiphorus* was apparently an error for *Aspidiphorus*, which has been used regularly in the literature after Latreille (1829) with either Dejean, Latreille or Ziegler cited as author. The changed spelling was used by Dejean himself in the subsequent edition (1837) of his catalog where it too was attributed to Ziegler, not Sturm or Latreille. Etymological considerations also suggest that a misspelling occurred in the original publication. There is no meaning for the stem 'arpid-' in the classical languages whereas 'aspid-' (= shield), when combined with 'phorus' (= bearer), is perfectly fitting given the form of these beetles. No internal evidence from Dejean's (1821) catalog has been found, however, to support the assumption that a lapsus calami or printer's error occurred. There have been four exceptions to the usage of *Aspidiphorus* in over 170 years: (1) the unjustified emendation *Aspidophorus* Agassiz, 1846 (p. 36); (2) the incorrect spelling

Asphidiphorus Arnold, 1938 (see Burakowski, Mroczkowski & Stefańska, 1986, p. 121); (3) the incorrect spelling *Asphidophorus* Kuhnt, 1912 (see Burakowski et al., 1986, p. 121) and (4) Dejean's (1821) original spelling *Arpidiphorus* which was used by Merkl (1986, p. 177) and Silfverberg (1979, p. 43; 1992, p. 51). As incorrect subsequent spellings the names noted in (2) and (3) are unavailable. The name *Aspidophorus* Agassiz is a junior homonym of the fish name *Aspidophorus* Lacépède, [1801]. An application (Case 2897) for the conservation of the fish name *Agonus* Bloch & Schneider, 1801 by the suppression for priority but not homonymy of *Aspidophorus* Lacépède, [1801] by Dr B.A. Sheiko (*Kamchatka Institute of Ecology, Russian Academy of Sciences, Petropavlovsk-Kamchatsky, Russia*) is published in BZN **52**: 57–60 (March 1995). Gistel (1848, p. viii) replaced *Aspidiphorus* Ziegler by *Box*, believing Ziegler's name to be a junior homonym of '*Aspidiphorus*' [sic] Lacépède. It is proposed that the names *Aspidophorus* Agassiz and *Box* Gistel be placed on the Official Index. A list of 90 references using the generally accepted spelling *Aspidiphorus* Ziegler in Dejean has been given to the Commission Secretariat in support of a request for conservation of the name. These references include the key works by Crowson (1955), Sen Gupta & Crowson (1979), Sen Gupta & Pal (1982), Burakowski & Ślipiński (1987) and McHugh (1993).

4. Thomson (1859, p. 90) proposed the genus *Coniporus*, into which he transferred the single species *Aspidiphorus orbiculatus* (Gyllenhal, 1808). *Coniporus* is thus a junior objective synonym of *Aspidiphorus*. Thomson placed *Coniporus* as the single genus in the new tribe 'Coniporina' (family CIOIDAE). *Sphindus* was transferred (p. 91) to the tribe 'Cioina' in the same family.

5. The 'Famille des Sphindides' was proposed (p. 224) to accommodate both *Sphindus* and *Aspidiphorus* in Jacquelin du Val's ('1859–63') treatment. The text and catalog sections of this work have been dated as 1860 by Silfverberg (1992, p. 51) and as 1861 by Burakowski, Mroczkowski & Stefańska (1986, p. 121). For this application I have adopted the later date but the nomenclatural outcome would be the same assuming either date.

6. Thomson (1863, p. 175) elevated his tribe (1859) Coniporina to family level. He described CONIPORIDAE and redescribed the type genus *Coniporus* and the only species *Coniporus orbiculatus* (Gyllenhal). He maintained Jacquelin du Val's ([1861]) family SPHINDIDAE for *Sphindus*, based on *S. dubius* (Gyllenhal).

7. Kiesenwetter (1877, p. 198) proposed a new family ASPIDIPHORIDAE in which he included only *Aspidiphorus*. He cited both the names *Coniporus* and CONIPORIDAE as synonyms.

8. Subsequent to Jacquelin du Val's ([1861]) placement of *Sphindus* and *Aspidiphorus* in the family SPHINDIDAE, some authors have continued to recognize a separate family for *Aspidiphorus*. For this they have consistently used the name ASPIDIPHORIDAE Kiesenwetter, 1877 rather than CONIPORIDAE Thomson, 1859 (see, for example, Houlbert, 1922; Schenkling, 1931; Horion, 1960; Freude, Harde & Lohse, 1967; Merkl, 1986). Recent studies indicate that *Aspidiphorus* and *Sphindus* are very closely related and clearly positioned within the clade that includes other generally accepted confamilial genera (see Sen Gupta & Crowson, 1979; McHugh, 1993). In the literature that considers *Sphindus* and *Aspidiphorus* confamilial, the family-group name SPHINDIDAE is often used. A list of references for works using the name SPHINDIDAE for a family including both *Sphindus* and *Aspidiphorus* and further

references using the name ASPIDIPHORIDAE (with *Sphindus* not included) has been given to the Commission Secretariat. Under Article 40b of the Code the name for the family including both genera is ASPIDIPHORIDAE Kiesenwetter, 1877 (1859), the date 1859 being derived from Thomson's tribal name based on *Coniporus* (see para. 4 above). ASPIDIPHORIDAE thus has priority over SPHINDIDAE Jacquelin du Val, [1861].

9. I have recently consulted a number of authorities (J.F. Lawrence, S.A. Ślipiński, A. Newton, J. Pakaluk and Q. Wheeler) on whether the name ASPIDIPHORIDAE or SPHINDIDAE should be used for the family group that includes both *Sphindus* and *Aspidiphorus*. There was no consensus. Since the group is so poorly known and the body of literature so small it seems appropriate to follow priority and use ASPIDIPHORIDAE as the valid name. ASPIDIPHORIDAE has been used in a major taxonomic work which will be appearing soon (Pakaluk, Ślipiński & Lawrence, in press). As a means of ratifying this and of promoting universality in the usage of the name I propose that ASPIDIPHORIDAE Kiesenwetter, 1877 (1859) be placed on the Official List.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that *Arpidiphorus* is an incorrect original spelling of *Aspidiphorus* Ziegler in Dejean, 1821;

(2) to place on the Official List of Generic Names in Zoology the name *Aspidiphorus* Ziegler in Dejean, 1821 (gender: masculine), type species by monotypy *Nitidula orbiculata* Gyllenhal, 1808;

(3) to place on the Official List of Specific Names in Zoology the name *orbiculata* Gyllenhal, 1808, as published in the binomen *Nitidula orbiculata* (specific name of the type species of *Aspidiphorus* Ziegler in Dejean, 1821);

(4) to place on the Official List of Family-Group Names in Zoology the name ASPIDIPHORIDAE Kiesenwetter, 1877 (1859) (type genus *Aspidiphorus* Ziegler in Dejean, 1821);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:

(a) *Arpidiphorus* Ziegler in Dejean, 1821 (ruled in (1)(a) above to be an incorrect original spelling of *Aspidiphorus* Ziegler in Dejean, 1821);

(b) *Aspidophorus* Agassiz, 1846 (an unjustified emendation of *Aspidiphorus* Ziegler in Dejean, 1821 and a junior homonym of *Aspidophorus* Lacépède, [1801]);

(c) *Box* Gistel, 1848 (an unnecessary replacement name for *Aspidiphorus* Ziegler in Dejean, 1821);

(d) *Coniporus* Thomson, 1859 (a junior objective synonym of *Aspidiphorus* Ziegler in Dejean, 1821).

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Case 2872

XANTHOLININI Erichson, 1839 and QUEDIINI Kraatz, 1857 (Insecta, Coleoptera): proposed precedence over senior synonyms, and *Quedius* Stephens, 1829: proposed designation of *Staphylinus levicollis* Brullé, 1832 as the type species

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Abstract. The purpose of this application is the conservation of the staphylinid beetle family-group names XANTHOLININI Erichson, 1839 and QUEDIINI Kraatz, 1857, which have senior but unused synonyms. The type species of *Quedius* Stephens, 1829 has been cited as '*Staphylinus tristis* Gravenhorst, 1802' but this is not an available name for the relevant taxon and it is proposed that the valid nominal species *S. levicollis* Brullé, 1832 be designated as the type species in accordance with the current taxonomic usage.

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1. Nordmann (1837) established several new names for 'familiae' in what is now the family STAPHYLINIDAE, including Platycnemidiformes (p. 6) for his new genus *Platycnemus* Nordmann, 1837 (p. 135; type species by monotypy *P. lateritius* Nordmann, 1837) and Agraeformes (p. 7) for his new genera *Agrodes* and *Araeocnemus*. Although these names do not have modern endings and were not formed from the correct stem according to the current Code, they are clearly latinized and based on a type genus (*Agrodes* was named after Agra ('ab Agra', p. 161), and the family name Agraeformes was apparently derived from the genitive of this (Agrae) rather than directly from *Agrodes*). Nordmann's family names must be considered available, but neither of them has been used subsequently as the valid name of a group (see Newton & Thayer, 1992, p. 25), although they were cited as junior synonyms by Handlirsch (1925, p. 573).

2. Kirby (1837, p. 88) established a new family name GYROHYPNIDAE for *Gyrohypnus* 'Kirb. Steph.' (actually Samouelle, 1819, p. 172). Problems with authorship and type species designations for *Gyrohypnus* were reviewed by Smetana (1979) and resolved in Opinion 1250 (BZN **40**: 85–87; July 1983) where the genus and its type species were placed on Official Lists. Kirby's family name has not been used subsequently as valid, or even cited as a synonym (Newton & Thayer, 1992, p. 25). However, the name GYROHYPNINI was proposed independently by Hatch (1957, p. 233) as a replacement name for XANTHOLININI Erichson, 1839 (p. 626) when the type genus *Xantholinus* Dejean, 1821 (p. 23) of the latter tribe was considered a junior objective synonym of *Gyrohypnus*. Hatch's use of GYROHYPNINI has not been followed by later authors (e.g. Arnett, 1963). The action of Opinion 1250 removed the objective synonymy of *Gyrohypnus* and *Xantholinus*, each of which is now considered a valid genus (e.g. Smetana, 1982).

3. Erichson (1839, p. 28) established the name XANTHOLININI for *Xantholinus* 'Dahl.' (actually Dejean, 1821) and several other genera. As with *Gyrohypnus*, problems with authorship and type species designations for *Xantholinus* were resolved in Opinion 1250. The name XANTHOLININI (or XANTHOLININAE) has been in universal use since the time of Erichson for a large tribe or subfamily of STAPHYLINIDAE (sometimes including subordinate tribes or subtribes) except for the single use of GYROHYPNINI by Hatch (1957) noted in para. 2 above. A list of 37 representative works illustrating usage of family-group names based on *Xantholinus* has been given to the Commission Secretariat. Among the more than 120 genus-group names currently included in the smallest family-group unit containing *Xantholinus* are *Gyrohypnus* and *Agrodes* (see paras. 1 and 2 above). *Agrodes* is currently treated as a subgenus of *Plochionocerus* Dejean, 1833 (e.g. Blackwelder, 1952, p. 42).

4. Kraatz ([1857], p. 473) established the family-group name Quediiformes for *Quedius* Stephens, 1829 (p. 22) and several other genera. The name QUEDIINI (or QUEDIINAE, QUEDIINA) has been in universal use since that time for a large tribe (or subfamily or subtribe) of STAPHYLINIDAE, sometimes including subordinate tribes or subtribes. A list of 37 representative works illustrating such usage has been given to the Commission Secretariat. Among the nearly 90 genus-group names currently included in the smallest family-group unit containing *Quedius* is *Platycnemus*, type genus of the older name PLATYCNEMINI Nordmann, 1837 (see para. 1 above). *Platycnemus* is currently treated as a junior subjective synonym of *Haematodes* Laporte, 1835 (e.g. Blackwelder, 1952, p. 312), which has not been used as the basis of a family-group name.

5. The composition of the tribe or subtribe QUEDIINI (-INA) has been undergoing revision and restriction in recent years (e.g. Smetana, 1977, 1984, 1988). The placement of *Haematodes* (or *Platycnemus*) has not been discussed in this connection, but examination of species of this genus indicates that *Haematodes* does not fit Smetana's restricted concept of QUEDIINI and may eventually be assigned to another named group of the subfamily STAPHYLININAE or form part of a new group. Most other currently recognized groups in the STAPHYLININAE also have younger names that would be threatened by addition of *Haematodes* (or *Platycnemus*) with its older but unused family-group name PLATYCNEMINI Nordmann, 1837 (see Newton & Thayer, 1992, pp. 64–66, for complete list of current names and dates). Stability of group names in the STAPHYLININAE will be served best if the name PLATYCNEMINI is not allowed to threaten any of the group names in current use in this subfamily, but is available as the name of a group containing *Haematodes* (see para. 4 above) and lacking other available names.

6. Questions about the publication date and type species designation for *Quedius*, type genus of the QUEDIINI, require resolution. Stephens (1829, p. 22) first used the name *Quedius* in a list, including under it 38 species names of which many are available names of earlier authors; inclusion of such names establishes availability of the generic name (Article 12b(5) of the Code). Although Blackwelder (1952, p. 335) and one or two later authors have cited this (1829) reference, most authors have continued to date *Quedius* from the formal description of the genus by Stephens (1832, p. 214). The earliest and generally accepted type species designation for *Quedius* was made by Curtis (1837, plate 638), who named the first-listed species of Stephens (1829), '*Staphylinus tristis* Gravenhorst', as type; Blackwelder (1952, p. 335)

documents later designations. '*Staphylinus tristis* Gravenhorst, 1802, p. 34' has been widely, and is currently, treated as a valid species of *Quedius* and cited as the type species of the genus (e.g. by Smetana, 1958, pp. 328, 362; Coiffait, 1978, pp. 9, 192). However, Gravenhorst (1802, p. 34) did not propose a new name *S. tristis* but referred his description under this name to '*Staphylinus tristis* Fabr. Syst. Ent. St. n. 21' (i.e. Fabricius, 1792, p. 524). This Fabricius name has long been placed as a synonym of *Staphylinus picipennis* Fabricius, 1792 (p. 521) or, in some recent works, used as the name of a 'variety' of *S. picipennis* (e.g. by Coiffait, 1974, p. 507). *Staphylinus* Linnaeus, 1758 and allied genera into which *S. picipennis* has often been moved are placed in the tribe (or subtribe) STAPHYLININI (-INA), whereas *Quedius* and its quoted type species '*S. tristis* Gravenhorst' is currently placed in the tribe (or subtribe) QUEDIINI (-INA). The problem of the unavailability of the name '*Staphylinus tristis* Gravenhorst' was noted by both Tottenham (1949) and Blackwelder (1952) but with different results. Tottenham (1949, p. 376) followed previous authors in considering *S. tristis* of Gravenhorst and of Fabricius as representing different taxa; as type species of *Quedius* he designated '*Staphylinus laevicollis* Brullé, 1832', a subjective synonym of '*Staphylinus tristis* Gravenhorst, 1802, nec Fabricius, 1792'. However, this designation does not meet the strict requirements of Article 69a(i) and (v) of the Code, since Stephens did not state that *S. tristis* Gravenhorst was a misidentification (cf. Article 70c) and *S. laevicollis* was not an originally included nominal species. In contrast, Blackwelder (1952, p. 335) cited *Staphylinus tristis* Fabricius, 1792 as type species of *Quedius*, without comment (and without change in the taxonomic status and placement of the genus), implicitly assuming that *S. tristis* of Gravenhorst and Fabricius represent the same taxon. Blackwelder's type species citation is formally valid but the consequential taxonomic assignment of the name *Quedius* would be at odds with the conclusions of all other authors that Gravenhorst misidentified *Staphylinus tristis* Fabricius and that the Fabricius species belongs in *Staphylinus* or an allied genus of the STAPHYLININI. In accordance with the Code (Articles 41, 65, 70) this case of a misidentified type species of a genus that is the type genus of a family-group taxon must be referred to the Commission. Stability in the application of the name *Quedius* at the generic and subgeneric levels, as well as application of the family-group name QUEDIINI, will be served best if an available name for the taxon '*Staphylinus tristis* Gravenhorst, 1802, nec Fabricius, 1792' is adopted for the type species. The oldest and therefore valid such name (e.g. Smetana, 1958, p. 362; Coiffait, 1978, p. 192) is the subjective synonym *Staphylinus levicollis* Brullé (1832, p. 131), previously selected as the type species of *Quedius* by Tottenham (1949, p. 376), as mentioned above. Brullé's name is generally spelled as the nomenclaturally equivalent *laevicollis* (see Article 58 of the Code). It is proposed here that the Commission use its plenary powers to set aside all other type designations for *Quedius* and designate *Staphylinus levicollis* Brullé as the type species in taxonomic agreement with the designation of Curtis (1837) mentioned above.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:

(a) to rule that the family-group name XANTHOLININI Erichson, 1839 is to be given precedence over the names AGRODINI Nordmann, 1837 and GYROHYPNINI Kirby, 1837;

(b) to rule that the family-group name QUEDIINI Kraatz, 1857 is to be given precedence over PLATYCNEMINI Nordmann, 1837;
(c) to rule that PLATYCNEMINI Nordmann, 1837 is not to be given priority over junior family-group names in general current usage in the STAPHYLININAE;
(d) to set aside all previous designations of type species for the nominal genus *Quedius* Stephens, 1829 and to designate *Staphylinus levicollis* Brullé, 1832 as the type species;

(2) to place on the Official List of Generic Names in Zoology the following names:
(a) *Agrodes* Nordmann, 1837 (gender: neuter), type species by monotypy *Agrodes elegans* Nordmann, 1837;
(b) *Platycnemus* Nordmann, 1837 (gender: masculine), type species by monotypy *Platycnemus lateritius* Nordmann, 1837;
(c) *Quedius* Stephens, 1829 (gender: masculine), type species by designation under the plenary powers in (1)(d) above *Staphylinus levicollis* Brullé, 1832;

(3) to place on the Official List of Specific Names in Zoology the following names:
(a) *elegans* Nordmann, 1837, as published in the binomen *Agrodes elegans* (specific name of the type species of *Agrodes* Nordmann, 1837);
(b) *lateritius* Nordmann, 1837, as published in the binomen *Platycnemus lateritius* (specific name of the type species of *Platycnemus* Nordmann, 1837);
(c) *levicollis* Brullé, 1832, as published in the binomen *Staphylinus levicollis* (specific name of the type species of *Quedius* Stephens, 1829);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
(a) AGRODINI Nordmann, 1837 (type genus *Agrodes* Nordmann, 1837), with the endorsement that it and other family-group names based on *Agrodes* are not to be given priority over XANTHOLININI Erichson, 1839 and other family-group names based on *Xantholinus* Dejean, 1821;
(b) XANTHOLININI Erichson, 1839 (type genus *Xantholinus* Dejean, 1821), with the endorsement that it and other family-group names based on *Xantholinus* are to be given precedence over those based on *Agrodes* Nordmann, 1837 or *Gyrohypnus* Samouelle, 1819;
(c) GYROHYPNINI Kirby, 1837 (type genus *Gyrohypnus* Samouelle, 1819), with the endorsement that it and other family-group names based on *Gyrohypnus* are not to be given priority over those based on *Xantholinus* Dejean, 1821);
(d) QUEDIINI Kraatz, 1857 (type genus *Quedius* Stephens, 1829) with the endorsement that it and other family-group names based on *Quedius* are to be given precedence over those based on *Platycnemus* Nordmann, 1837;
(e) PLATYCNEMINI Nordmann, 1837 (type genus *Platycnemus* Nordmann, 1837) with the endorsement that it and other family-group names based on *Platycnemus* are not to be given priority over over junior family-group names in general current usage in the STAPHYLININAE.

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Case 2916

Metablastothrix Sugonjaev, 1964 (Insecta, Hymenoptera): proposed designation of *Blastothrix* (*Metablastothrix*) *isomorpha* Sugonjaev, 1964 as the type species

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Abstract. The purpose of this application is the designation of *Blastothrix* (*Metablastothrix*) *isomorpha* Sugonjaev, 1964 as the type species of the encyrtid genus *Metablastothrix* Sugonjaev, 1964. At present the type species is *Microterys truncatipennis* Ferrière, 1955 but this was based on a misidentification. *Metablastothrix* has a Holarctic distribution and the species are secondary parasitoids of some injurious coccids. Conservation of the generic name will help to ensure stability in the economically important family ENCYRTIDAE Walker, 1837.

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1. Mayr (1876, p. 697) established the genus *Blastothrix*. Its type species is *Encyrtus sericeus* Dalman, 1820 (p. 357) by subsequent designation of Ashmead (1900, p. 389). *Blastothrix* belongs to the subtribe BLASTOTRICHINA Erdös & Novicky, 1955 (p. 167) (this is the correct spelling, see p. 223 of the Code) of the tribe APHYCINI Hoffer, 1954 and now includes 24 described species. Members of this genus are primary endoparasitoids of coccids (Homoptera, COCCIDAE).

2. Ferrière (1955, p. 127) described *Microterys truncatipennis* from Germany, which parasitizes the coccid *Eulecanium franconicum* Lindinger, 1912. Hoffer (1957, p. 220) transferred Ferrière's species to *Blastothrix* Mayr, 1876. Sugonjaev (1959, p. 169; 1960, p. 378; 1962, pp. 193, 194) identified as *B. truncatipennis* specimens reared by him from the same coccid species in the Leningrad (now St. Petersburg) Province.

3. Sugonjaev (1964, p. 371) established *Metablastothrix* as a subgenus of *Blastothrix* and later Sugonjaev & Babaev (1978, p. 66) raised *Metablastothrix* to generic rank.

4. Sugonjaev (1964) originally included in *Metablastothrix* two nominal species: *Blastothrix (Metablastothrix) truncatipennis* (Ferrière), designated by him as the type species, and a new species *B. (M.) isomorpha* Sugonjaev, 1964 (p. 371) from Kazakhstan. Trjapitzin & Gordh (1978a, p. 379) transferred to *Metablastothrix* the North American species *Microterys claripennis* Compere, 1928.

5. In 1991-1992 the authors of the present application examined the type series of *Microterys truncatipennis* Ferrière, 1955 preserved in the Muséum d'Histoire naturelle, Geneva. All specimens of the type material, the female holotype (of which only legs are left), two female paratypes and one male paratype are not congeneric with the species studied by Sugonjaev (1959) and do not accord with the description and concept of *Metablastothrix*, but belong to *Blastothrix* in accordance with Hoffer's (1957) placement (see para. 2 above).

6. The type species of *Metablastothrix* was based on a misidentification and retention of the nominal species *Microterys truncatipennis* Ferrière, 1955 as type would render *Metablastothrix* Sugonjaev, 1964 a junior subjective synonym of *Blastothrix* Mayr, 1876. To preserve the current understanding and usage of the name *Metablastothrix* which is already included in some reviews and monographs (e.g. Trjapitzin & Gordh, 1978a, 1978b; Sugonjaev, 1984; Sugonjaev & Trjapitzin, 1988; Trjapitzin, 1989) it is proposed that *Blastothrix (Metablastothrix) isomorpha* Sugonjaev, 1964 be designated as its type species.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Metablastothrix* Sugonjaev, 1964 and to designate *Blastothrix (Metablastothrix) isomorpha* Sugonjaev, 1964 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Metablastothrix* Sugonjaev, 1964 (gender: feminine), type species by designation in (1) above *Blastothrix (Metablastothrix) isomorpha* Sugonjaev, 1964;

(3) to place on the Official List of Specific Names in Zoology the name *isomorpha* Sugonjaev, 1964, as published in the binomen *Blastothrix (Metablastothrix) isomorpha* (specific name of the type species of *Metablastothrix* Sugonjaev, 1964).

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Case 2897

Agonus Bloch & Schneider, 1801 (Osteichthyes, Scorpaeniformes): proposed conservation; AGONIDAE Kirby, 1837 (Insecta, Coleoptera) and AGONIDAE Swainson, 1839 (Osteichthyes, Scorpaeniformes): proposed removal of homonymy

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Abstract. The purpose of this application is to conserve the generic name *Agonus* Bloch & Schneider, 1801 for a single species. The name is threatened by the senior objective synonym *Aspidophorus* Lacépède, [1801], for which suppression is proposed. *Agonus cataphractus* (Linnaeus, 1758) is a common fish found in European northern seas and is of economic importance as a predator on young edible shellfish. It is also proposed that the homonymy between AGONIDAE Swainson, 1839 (Osteichthyes, Scorpaeniformes) and AGONIDAE Kirby, 1837 (Insecta, Coleoptera) be removed by emending the stem of the generic name *Agonum* Bonelli, 1810, on which the insect family-group name is based, to AGONUM-.

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1. Lacépède ([1801], p. 221) established the new genus *Aspidophorus* in vol. 3 of his *Histoire naturelle des poissons*, dated as 'An X' (23 September 1801–22 September 1802) of the French republican calendar. The volume was consistently dated as 1802 until Roux (1973) demonstrated that it appeared shortly before 16 October 1801, when Lacépède presented the published work to the French Academy of Sciences. Lacépède included two nominal species in *Aspidophorus*. Bory de Saint Vincent (1822, p. 27) designated *Cottus cataphractus* Linnaeus, 1758 as the type species, which Lacépède included in the genus under the synonymy of his own *Aspidophorus armatus* Lacépède, [1801].

2. Linnaeus (1758, p. 264) based the description of his species *Cottus cataphractus* on two sources, Artedi's (1738) *Ichthyologia* (Genera piscium, p. 49; Synonymia, p. 77; and Descriptiones Specierum, p. 87) and Linnaeus's own (1754) *Museum Adolphi Friderici* (p. 70). Fernholm & Wheeler (1983, p. 236) accepted a specimen in the Swedish Museum of Natural History in Stockholm (catalogue no. NRM 2808) as part of the type series.

3. Bloch & Schneider (1801, p. 104, pl. 27) established the genus *Agonus* to include four nominal species, among them *Cottus cataphractus* Linnaeus. It has proved impossible to ascertain the exact date of appearance of Bloch's work, published posthumously by Schneider (see Sheiko, [1993]), the earliest mention of the work known to me being that of 8 April 1802 in the journal *Göttingische Gelehrte Anzeigen unter der Aufsicht der königliche Gesellschaft der Wissenschaften* (**1802**, vol. 1, parts 56–57, p. 553). Under Article 21c(ii) of the Code publication must therefore be deemed to be 31 December 1801. The type species of *Agonus* is *C. cataphractus* Linnaeus by subsequent designation by Tilesius in Pallas ([1814], p. 109, footnote; see

Opinion 212, March 1954 for the date of publication of Pallas's work). Gill (1861, p. 161) cited *C. cataphractus* as the type species.

4. It follows that *Agonus* Bloch & Schneider is a junior objective synonym of *Aspidophorus* Lacépède. *Aspidophorus* was occasionally used as valid by authors in the first half of the 19th century (e.g. Bory de Saint Vincent, 1822, who commented 'C'est l'*Agonus* de Schneider') but all later authors have placed it in the synonymy of *Agonus*. The genus currently includes the single species *A. cataphractus* which is very common and is discussed in faunistic, ecological and experimental works. The most important works published in the last 50 years in which the name has appeared include Poll (1947), Saemundsson (1949), Andriashev (1954, 1986), Bruun & Pfaff (1950), Wheeler (1969, 1978), Joensen & Tåning (1970), Russell (1976) and Ilyina (1978). I propose that the name *Agonus* should be conserved by the suppression of *Aspidophorus*.

5. An application (Case 2918) for the conservation of the coleopteran name *Aspidiphorus* Ziegler in Dejean, 1821 by Dr Joseph V. McHugh (*Cornell University, Ithaca, New York, U.S.A.*) is published in BZN **52**: 44–47 (March 1995). Dr McHugh has also proposed that the name *Aspidophorus* Agassiz, 1846 (an unjustified emendation of *Aspidiphorus* Ziegler and a junior homonym of *Aspidophorus* Lacépède, [1801]) be placed on the Official Index.

6. The family name AGONIDAE was established by Swainson (1839, pp. 181, 272) based on *Agonus* Bloch & Schneider, 1801. The name is in general use for a family which includes some 20 nominal genera and 45 nominal species. Members of this family are found in all the northern seas and also along the coasts of Chile and Argentina. Many species are very common and have considerable ecological importance.

7. The genus *Agonum* was described by Bonelli (1810). His *Observations entomologiques* appeared in two parts, part 1 in 1810 (*Mémoires de l'Académie Impériale des Sciences, Littérature et Beaux-Arts de Turin*, **18**: 21–78) and part 2 in 1813 (*Mémoires de l'Académie Impériale ...*, **20**: 433–484). *Agonum* appeared in Bonelli's *Tabula synoptica*, which was not published in either part in the *Mémoires* but which appeared (1810) with the reprints of part 1 (see Gaskin & Lewis, 1956; Madge, 1975; Liebherr, 1986). Part 1 of the *Observations entomologiques*, including the *Tabula synoptica*, was approved as an available work by the Commission in Opinion 1226 (September 1982). There were no species included in *Agonum* until Panzer (1813, p. 52) included 12 nominal taxa, among them *Carabus marginatus* Linnaeus, 1758 (p. 416). The latter was designated the type of *Agonum* by Curtis (1827, text to fig. 183; see Madge, 1975 for details).

8. The family AGONIDAE was established by Kirby (1837, p. 23) based on *Agonum* Bonelli, 1810. The name AGONIDAE is currently regarded as a junior synonym of PLATYNINI Bonelli, 1810 (see Habu, 1973, p. 70). The latter (originally published as 'Platynii') was based on *Platynus* Bonelli, 1810. The genera *Agonum* and *Platynus* are closely related (see Liebherr, 1986) and their names are often considered to be synonyms (see, for example, Habu, 1973; Kryzhanovskij, 1983). However, the possibility that at some time a family-group based on *Agonum* might be required cannot be excluded. I therefore propose that the homonymy between AGONIDAE Swainson, 1839 (Osteichthyes) and AGONIDAE Kirby, 1837 (Insecta) be removed by ruling that the stem of *Agonum* is AGONUM-.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
  (a) to suppress the generic name *Aspidophorus* Lacépède, [1801] for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
  (b) to rule that for the purposes of Article 29 of the Code the stem of the generic name *Agonum* Bonelli, 1810 is AGONUM-;

(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Agonus* Bloch & Schneider, 1801 (gender: masculine), type species by subsequent designation by Tilesius in Pallas ([1814]) *Cottus cataphractus* Linnaeus, 1758;
  (b) *Agonum* Bonelli, 1810 (gender: neuter), type species by subsequent designation by Curtis (1827) *Carabus marginatus* Linnaeus, 1758;

(3) to place on the Official List of Specific Names in Zoology the following names:
  (a) *cataphractus* Linnaeus, 1758, as published in the binomen *Cottus cataphractus* (specific name of the type species of *Agonus* Bloch & Schneider, 1801);
  (b) *marginatus* Linnaeus, 1758, as published in the binomen *Carabus marginatus* (specific name of the type species of *Agonum* Bonelli, 1810);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
  (a) AGONIDAE Swainson, 1839, type genus *Agonus* Bloch & Schneider, 1801 (Osteichthyes);
  (b) AGONUMIDAE Kirby, 1837, type genus *Agonum* Bonelli, 1810 (spelling emended by the ruling in (1)(b) above) (Insecta);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Aspidophorus* Lacépède, [1801], as suppressed in (1)(a) above;

(6) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name AGONIDAE Kirby, 1837 (spelling emended to AGONUMIDAE in (1)(b) above).

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Case 2931

Proposed conservation of nine specific names of southern Afrotropical birds which are junior synonyms

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Abstract. The purpose of this application is to conserve nine widely used specific names of southern Afrotropical birds which are threatened by unused senior synonyms, eight of which were published in the *Encyclopaedia Londinensis* (1795–1829) edited by John Wilkes. The ninth unused name was published by C.J. Temminck (1807) in his *Catalogue systématique du cabinet d'ornithologie.*

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1. As a result of Rookmaaker's (1989) work on the early history of the zoological exploration of southern Africa, nine specific names of southern Afrotropical birds in widespread use in the primary and more popular literatures were found to be antedated by long-overlooked synonyms. Eight of these names were published in the *Encyclopaedia Londinensis* (1795–1829) 'compiled, digested and arranged' in 24 volumes by John Wilkes. It appears (Rookmaaker, 1989) that Wilkes died in 1811; a note at the end of vol. 10 of the *Encyclopaedia Londinensis* says that the publishers had all the material necessary for completion of the work. There is no evidence as to the identity of the contributors, although Cassin (1867) and Sherborn (1922–1932) attributed the articles on birds to Wilkes in his capacity as editor. The ninth specific name was published by Temminck (1807, p. 85) for 'Le Nabirop, ou etourneau cuivré d'Afrique, Vaill. Ois. d'Af. v. 2, pl. 89'; Temminck's specimen was probably presented to him by François Levaillant (Rookmaaker, 1989, p. 198).

2. Most professional workers are now totally opposed to changing names unnecessarily, especially in cases such as the present where the recently discovered names have remained essentially ignored since 1820. Reference to the Wilkes names was made by the American worker John Cassin (1867) but his findings seem to have been ignored until the British workers Gregory Mathews & Tom Iredale (1921, p. 143) mentioned two of the names: *Motacilla fimbriata* Wilkes, 1817 (p. 100), a junior synonym of *Stipiturus malachurus* Shaw, 1798, and *M. tractrac* Wilkes, 1817 (p. 89), a senior synonym of *Oenanthe cinerea* Vieillot, 1818. Their paper resulted in the universal adoption of *M. tractrac* (now *Cercomela tractrac*; see Roberts, 1922, p. 231 and Sclater, 1930, p. 456). Curiously, Roberts (1924, p. 174) attributed the specific name to Boie instead of Wilkes, but without explanation.

3. We (Clancey & Brooke, 1990, p. 144) proposed the acceptance of Wilkes's authorship of two specific names widely used in the 20th century but normally attributed to later authors: those of *Motacilla familiaris* Wilkes, 1817 (p. 86), now *Cercomela familiaris*, and of *M. formicivora* Wilkes, 1817 (p. 88), now *Oenanthe formicivora*. The long acceptance of *M. tractrac* Wilkes, 1817 is the reason why we have not sought the suppression of the *Encyclopaedia Londinensis* for the purposes of zoological nomenclature. Also, we are quite unaware of what the effects of such a suppression might be on the nomenclature of groups other than African birds.

4. The unused senior synonyms in the list below are threats to long-established names and we can see no advantages in using them to replace those in general use.

Senior synonym	**Junior synonym in use**
Sturnus nabirop Temminck, 1807, p. 85	*Lamprotornis nitens phoenicopterus* Swainson, [1837], p. 360
Alauda rostro-crasso Wilkes, [1796], p. 235	*Galerida magnirostris* (Stephens, 1826), p. 26
Alauda percutiens Wilkes, [1796], p. 236	*Mirafra apiata* (Vieillot, 1816), p. 342
Motacilla citrina Wilkes, 1817, p. 78	*Prinia flavicans* (Vieillot, [1820]), p. 438
Motacilla viridis Wilkes, 1817, p. 80	*Camaroptera brachyura* (Vieillot, [1820]), p. 459
Motacilla arenarea Wilkes, 1817, p. 85	*Motacilla aguimp* Temminck [1820], p. lxviii
Motacilla montana Wilkes, 1817, p. 89	*Oenanthe monticola* Vieillot, 1818, p. 434
Motacilla tcheric Wilkes, 1817, p. 94	*Zosterops pallidus* Swainson, [1837], p. 294
Oriolus africanus Wilkes, 1820, p. 740	*Oriolus larvatus* Lichtenstein, 1823, p. 20

5. All the Wilkes names except *M. viridis* are recorded in Sherborn's *Index Animalium*, where however *arenarea* and *tcheric* are spelled as *arenaria* and *teheric*. Sherborn did not record *Sturnus nabirop* Temminck, 1807, although he did list the nearly homonymous *S. nabouroup* Daudin, 1800 (p. 308). Temminck (1807, pp. 85, 87) applied his own name *S. nabirop* and Daudin's *S. nabouroup* to different species, illustrated by Levaillant (1799) on pls. 89 and 91 with the vernacular names 'le nabirop' and 'le nabouroup' of Hottentot origin.

6. The Commission Secretariat holds a list of 56 primary literature references (mostly checklists and faunal works) published in the last 50 years in which the nine names proposed by Temminck and Wilkes do not appear but which illustrate usage of their junior synonyms. An examination of the 20th century periodical and more popular literature would produce a list of many hundreds of citations in support of current usage, and demonstrate lack of awareness of the nine names of Temminck and Wilkes. The case meets the prima facie criteria for conservation of names given in Article 79c of the Code.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *nabirop* Temminck, 1807, as published in the binomen *Sturnus nabirop*;
   (b) *rostrocrasso* Wilkes, [1796], as published in the binomen *Alauda rostrocrasso*;
   (c) *percutiens* Wilkes, [1796], as published in the binomen *Alauda percutiens*;
   (d) *citrinus* Wilkes, 1817, as published in the binomen *Motacilla citrinus*;
   (e) *viridis* Wilkes, 1817, as published in the binomen *Motacilla viridis*;
   (f) *arenarea* Wilkes, 1817, as published in the binomen *Motacilla arenarea*;
   (g) *montana* Wilkes, 1817, as published in the binomen *Motacilla montana*;
   (h) *tcheric* Wilkes, 1817, as published in the binomen *Motacilla tcheric*;
   (i) *africanus* Wilkes, 1820, as published in the binomen *Oriolus africanus*;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *phoenicopterus* Swainson, [1837], as published in the binomen *Lamprotornis phoenicopterus*;
   (b) *magnirostris* Stephens, 1826, as published in the binomen *Alauda magnirostris*;
   (c) *apiata* Vieillot, 1816, as published in the binomen *Alauda apiata*;
   (d) *flavicans* Vieillot, [1820], as published in the binomen *Sylvia flavicans*;
   (e) *brachyura* Vieillot, [1820], as published in the binomen *Sylvia brachyura*;
   (f) *aguimp* Temminck, [1820], as published in the binomen *Motacilla aguimp*;
   (g) *monticola* Vieillot, 1818, as published in the binomen *Oenanthe monticola*;
   (h) *pallidus* Swainson, [1837], as published in the binomen *Zosterops pallidus*;
   (i) *larvatus* Lichtenstein, 1823, as published in the binomen *Oriolus larvatus*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
   (a) *nabirop* Temminck, 1807, as published in the binomen *Sturnus nabirop* and as suppressed in (1)(a) above;
   (b) *rostrocrasso* Wilkes, [1796], as published in the binomen *Alauda rostrocrasso* and as suppressed in (1)(b) above;
   (c) *percutiens* Wilkes, [1796], as published in the binomen *Alauda percutiens* and as suppressed in (1)(c) above;
   (d) *citrinus* Wilkes, 1817, as published in the binomen *Motacilla citrinus* and as suppressed in (1)(d) above;
   (e) *viridis* Wilkes, 1817, as published in the binomen *Motacilla viridis* and as suppressed in (1)(e) above;
   (f) *arenarea* Wilkes, 1817, as published in the binomen *Motacilla arenarea* and as suppressed in (1)(f) above;
   (g) *montana* Wilkes, 1817, as published in the binomen *Motacilla montana* and as suppressed in (1)(g) above;
   (h) *tcheric* Wilkes, 1817, as published in the binomen *Motacilla tcheric* and as suppressed in (1)(h) above;
   (i) *africanus* Wilkes, 1820, as published in the binomen *Oriolus africanus* and as suppressed in (1)(i) above.

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Comments on the proposed conservation of usage of *Acanthoteuthis* Wagner in Münster, 1839 and *Kelaeno* Münster, 1842 (Mollusca, Cephalopoda)
(Case 2902; see BZN **51**: 219–223)

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In my application to the Commission I omitted to mention that d'Orbigny, who is credited with the first available publication of the generic name *Kelaeno* in 1841, himself later abandoned that name in the sense in which he had first used it, and adopted Münster's name *Acanthoteuthis* for the taxon in question. In 1845 (p. 407) he wrote in his systematic text : 'ACANTHOTEUTHIS Wagner / Syn. Kelaeno Munster 1846 (non Kelaeno Munster 1842)'. Thus it is clear that he adopted these two generic names in the sense used by the German palaeontologists Wagner and Münster.

Additional reference

Orbigny, A.d'. 1845. *Mollusques vivants et fossiles ou description de toutes les espèces de coquilles et de mollusques classées suivant leur distribution géologique et géographique*, vol. 1. 432 pp. Gide, Paris.

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Donovan has clearly and correctly presented the facts concerning the state of *Acanthoteuthis* Wagner in Münster, 1839 and *Kelaeno* Münster, 1842. I fully support and agree with his proposals to the Commission.

I may mention that Münster (1839, p. 681) referred to *Acanthoteuthis* in a second paper, but as a nomen nudum.

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Münster, G. Graf zu. 1839. Über einige Versteinerungen in den lithographischen Schiefern von Baiern. *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefaktenkunde*, **5**: 676–682.

(3) Marion Nixon
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I support the proposed application to conserve the current usage of the names *Acanthoteuthis* Wagner in Münster, 1839 and *Kelaeno* Münster, 1842 for two genera of Jurassic teuthoid coleid cephalopods.

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1. I fully agree with Donovan that *Acanthoteuthis* Wagner in Münster, 1839 is a valid genus with *Acanthoteuthis speciosa* Münster, 1839 as its type species as designated by Bülow-Trummer in 1920.

2. I also agree that *Kelaeno* was not made available in Münster (1839) by the simple mention of the name. It does not appear in any combination with a valid specific name, nor is any indication given.

3. D'Orbigny (1841) published *Kelaeno* with two nominal species, *K. speciosa* (Münster, 1839) and *K. prisca* (Rüppell, 1829). Under Article 12b(5) of the Code this makes *Kelaeno* d'Orbigny, 1841 an available name. No type species was designated by d'Orbigny (1841). Later d'Orbigny (1842–1846) figured four specimens under the name *Kelaeno speciosa*; three of them belong to *Acanthoteuthis* and one is the gladius of *Plesioteuthis prisca* (Rüppell, 1829). D'Orbigny mixed up the two species, which belong to different orders of coleoid cephalopods. In Engeser (1986) I stated that *Kelaeno* d'Orbigny, 1841 is an objective synonym of *Acanthoteuthis* Wagner in Münster, 1839. However, this is not correct since d'Orbigny had mentioned two species in combination with *Kelaeno* and a type species had not then been designated for that genus. In Engeser (1987) I corrected this and designated *Acanthoteuthis speciosa* Münster, 1839 as its type species. Thus *Kelaeno* d'Orbigny, 1841 is an objective synonym of *Acanthoteuthis* Wagner in Münster, 1839.

4. As stated in para. 2 of the application, it is clear that in 1842 Münster used *Kelaeno* in a quite different sense from d'Orbigny the previous year. Münster included two nominal species, *K. scutellaris* and *K. arquata*, and Bülow-Trummer (1920) later selected *K. arquata* as type species (para. 5 of the application). However, *Kelaeno* Münster, 1842 is a homonym of *Kelaeno* d'Orbigny, 1841. *Celaeno* Owen, 1844 is only an incorrect subsequent spelling and not available, but Wagner (1860) explicitly 'corrected' the latinization of *Kelaeno* Münster, 1842 to *Celaeno* and this, although an unjustified emendation, is an available name. *Celaeno* Wagner, 1860 is a junior objective synonym of *Kelaeno* Münster, 1842.

5. Schevill (1950) wrongly interpreted *Kelaeno* Münster, 1839 as an available name and *Kelaeno* Münster, 1842 as a junior homonym of it. He proposed the replacement name *Münsterella*, but his designation of *K. scutellaris* as type species is invalid since *K. arquata* is automatically the type under Article 67h of the Code. Roger (1952) and Krimholz (1958) followed the argument of Schevill (1950). I (Engeser, 1988) rejected Schevill's (1950) argument and pointed out the homonymy between *Kelaeno* d'Orbigny, 1841 and *Kelaeno* Münster, 1842. Two junior synonyms were available as a replacement name — *Celaeno* Wagner, 1860 and *Münsterella* Schevill, 1850. Since *Celaeno* Wagner, 1860 is preoccupied (see para. 3 of the application), I adopted *Münsterella* (now spelled *Muensterella*) Schevill, 1950 instead of *Kelaeno* Münster, 1842. I see no reason to change my view and therefore do not support Donovan's proposal.

6. I also have a different view of the 'generally accepted usage' of Münster's *Kelaeno*. My synonymy list (Engeser, 1988) shows that in the past 150 years about ten authors have used the spelling *Kelaeno* (including the incorrect subsequent spellings *Kalaeno* Krimholz, 1958 and *Kelaena* Walther, 1904), about five authors have used *Celaeno* and four have used *Münsterella* (or its corrected form *Muensterella*). Kretzoi (1942) figured the genus in question under the generic name *Listroteuthis* Naef, 1922, but this was probably a lapsus calami for *Celaeno* since *Listroteuthis* was called

Celaeno. Bandel & Boletzky (1988) called the genus *Celaenoteuthis* for unknown reasons. Since 1950, four authors have used *Kelaeno* (and variants, including *Celaeno*) and four authors *Muensterella* (including *Münsterella*). It follows that there is no consistent use of the generic name *Kelaeno* (including *Celaeno*) for the genus of coleoid cephalopods proposed by Münster in 1842.

7. Since there is confusion in the meaning of *Kelaeno* and also in its spelling, it would be best to reject *Kelaeno* Münster, 1842 as a junior homonym of *Kelaeno* d'Orbigny, 1841, and to use the unambiguous replacement name *Muensterella* Schevill, 1950 (with *Kelaeno arquata* Münster, 1842 as the type species).

8. The family name KELAENIDAE (or CELAENIDAE) based on *Kelaeno* (or *Celaeno*) has a similar inconsistent use in the literature. It would be preferable to replace it by MÜNSTERELLIDAE Roger, 1952 in its corrected form MUENSTERELLIDAE.

9. For the reasons given above, I support Donovan's proposals regarding *Acanthoteuthis* but oppose the conservation of *Kelaeno* Münster, 1842. *Muensterella* Schevill, 1850 should be used rather than *Kelaeno*.

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Comments on the proposed conservation of *Lironeca* Leach, 1818 (Crustacea, Isopoda) as the correct original spelling

(Case 2915; see BZN **51**: 224–226)

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A few remarks in defence of the name *Livoneca* Leach, 1818 and in opposition to the application seem to be called for.

As Drs Williams and Bowman have pointed out, in Leach's original publication (1818) the spelling *Livoneca* and its French equivalent Livonèce appeared consistently (4 and 5 times respectively). No explanation was given for this name nor for the others in the group, among which are *Nelocira*, *Cirolana*, *Conilera*, *Rocinela*, *Canolira*, *Anilocra*, *Olencira* and *Nerocila*. It was only much later that White (1857, p. 250) pointed out the connection with the name Carolina in the cases of *Cirolana*,

Conilera and *Rocinela*, which 'were formed by Dr. Leach from the word Carolina by transposing the letters, and by changing one of the *a*'s into an *e* in the two latter names'. There is no evidence in the original publication that *Livoneca* was an inadvertent spelling error and it thus has to be considered an available name.

For more than a century (1818–1931) the name *Livoneca* was used practically exclusively. I know of only two authors who used *Lironeca* then (White, 1847, p. 109, and Miers, 1876, p. 106); neither gave any reason for the use of this spelling. The original spelling *Livoneca* appeared in all major and widely consulted handbooks dealing with cymothoid Isopoda published in the 19th century and in the first half of the 20th.

The first explicit challenge to the spelling *Livoneca* known to me was by Monod (1931, p. 5), who remarked in a footnote 'depuis la création du genre (1818), seul Miers [1876, as mentioned above] a écrit *Lironeca* au lieu de *Livoneca*'. Monod continued that a typographic error was evident in Leach's original paper and that under the *Règles Internationales* the spelling had to be corrected to *Lironeca*. This was understandable, since the *Règles* current in 1931 did not exclude circumstantial evidence. However, in the Codes published in 1961 and later such evidence is excluded (see Article 32 of the current edition) and so *Livoneca* has to be treated as the correct original spelling; Monod (1931) is the author of the unjustified emendation *Lironeca*.

As shown by Drs Williams & Bowman, *Livoneca* was the dominant spelling until Bowman (1960) reintroduced *Lironeca*. I have several times remonstrated to Dr Bowman and Dr Monod about the 'error of their ways' but to no avail. Dr Bowman's authority is such that other isopod workers have followed him in using *Lironeca*, but use of *Livoneca* has continued to this day although on a much reduced scale.

Personally I do not think it right to suppress an available name which was practically the only one used from 1818 to 1931, which was dominant until 1960, and which has had some usage since then. I consider that *Livoneca* Leach, 1818 should be put on the Official List of Generic Names but that no further action is necessary. However, the referral of the case to the Commission by Drs Williams & Bowman was a good idea since it will settle the status of the two spellings and end the controversy.

A final although minor point is that Fowler (1912, p. 278) and not Gurjanova (1936) was the first to designate *L. redmanii* as the type species, and this should be recorded in the eventual Opinion.

Additional references

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Fowler, H.W. 1912. The Crustacea of New Jersey. *Annual Report of the New Jersey State Museum*, **1911**: 31–650.

Miers, E.J. 1876. Catalogue of the stalk and sessile-eyed Crustacea of New Zealand. *Colonial Museum and Geological Department of New Zealand, Natural History Publication*, no. 10. xii, 133 pp.

White, A. 1857. *A popular history of British Crustacea*. 358 pp., 20 pls. Reeve, London.

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Under the Code the first available spelling is *Livoneca*, and this has often been used. In my opinion arguments about printing errors are irrelevant, and I oppose the application.

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About 70 species have been included in *Livoneca* Leach, 1818 (see Bruce, 1990). Many of these species are common and widely recorded, and some may be regarded as of potential economic importance as fish parasites. I (Bruce, 1990) revised the diagnosis of the genus and transferred all but two (or perhaps three) species to other genera, principally *Elthusa* Schiødte & Meinert, 1884 and *Ichthyoxenus* Herklots, 1870. I regard the genus as being restricted to the New World.

I welcome this opportunity of finally resolving the conflict over the correct spelling of *Livoneca*. I do not support the application, and I endorse the spelling *Livoneca* for the following reasons:

(a) Article 32c(ii) of the Code unambiguously gives *Livoneca* as the correct spelling.

(b) There is no taxonomic confusion.

(c) Leach never, in his 1818 publication or elsewhere, gave the reason for his choice of names. It would appear that the use of Caroline/Carolina anagrams for blood-sucking parasites was a cunning, repetitive and enduring insult to Caroline, who was the estranged wife of the Prince of Wales and who has been described as an unlovable adulteress. The Prince was of similar disposition, and tried repeatedly to divorce her; on becoming King George IV he prevented her coronation and had her put on trial for adultery. Evidently Leach was sympathetic to the Prince's cause.

(d) In their application Drs Williams and Bowman show that both spellings have been used to the present time. In the most recent revision of the genus (Bruce, 1990) I followed the Code in the interest of stability, and used *Livoneca*.

(e) The argument that Leach intended to use *Lironeca* is irrelevant, even if on circumstantial grounds it is true: it is what is actually published that determines the correct original spelling of a name. *Livoneca* should be put on the Official List of Generic Names to settle the matter permanently. There is no point in putting the name LIVONECINAE Schiødte & Meinert, 1884 on the Official List of Family-Group Names (cf. proposal (4) on BZN **51**: 225); it is automatically a correct spelling but is not needed taxonomically — I (Bruce, 1990, p. 250) gave precedence to the subfamily name ANILOCRINAE of the same authorship.

Additional reference

Bruce, N.L. 1990. The genera *Catoessa*, *Elthusa*, *Enispa*, *Ichthyoxenus*, *Idusa*, *Livoneca*, and *Norileca* n. gen. (Isopoda, Cymothoidae), crustacean parasites of marine fishes, with descriptions of eastern Australian species. *Records of the Australian Museum*, **42**: 247–300.

Comment on the proposed conservation of usage of the generic names *Melanophila* Eschscholtz, 1829 and *Phaenops* Dejean, 1833 (Insecta, Coleoptera)
(Case 2837/2; see BZN **50**: 31–34, 56, 232–234; **51**: 43–46)

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With regard to what has become a somewhat heated debate and with deference and respect to all our colleagues who have previously expressed opinions regarding this application, we should like to add our views to the mix.

The Old World literature that contains references to the names *Melanophila* Eschscholtz, 1829 and *Phaenops* Dejean, 1833 is much more extensive than that of the New World and any change will result in extreme confusion. Furthermore, classical taxonomic literature (regional faunas and catalogues and the like) should receive some extra consideration in this debate over the quantity and variety of economic literature.

While it is true that *Phaenops* has often been regarded as a synonym of *Melanophila* in the New World non-economic buprestid literature, until recently and mostly because of the confusion perpetuated by Leraut's (1983) inexperienced and disruptive nomenclatural effort, the only revision of these taxa was that by Sloop (1937). In that work North American *Melanophila* was defined as being comprised of three subgenera, with those of *Melanophila* and *Phaenops* discussed in terms of species that agree with the traditional descriptors of these taxa; *Melanophila acuminata* De Geer and *Buprestis cyanea* Fabricius respectively were listed as the type species.

Nelson (1989) apparently accepted Leraut's (1983) opinions. However, in the first part of a monograph on *Melanophila* sensu lato, Cobos (1986) neither incorporated Leraut's proposals nor argued in any way for a change that conflicts with Mühle's application. Cobos listed the type species of *Melanophila* as *acuminata* De Geer and that of *Phaenops* as *cyanea* Fabricius. Since this work (as yet incomplete) is the most recent revision on a global scale and agrees in detail with the proposals in Mühle's application, we urge that in this case stability should override strict priority.

Thus, we support the course that will most reliably preserve the stability of nomenclature of these taxa. *Melanophila* and *Phaenops* should be conserved as valid generic names with the type species fixed as those proposed in Mühle's application, in accord with Sloop's (1937) revision and Cobos's (1986) monograph.

Additional reference

Sloop, K.D. 1937. A revision of the North American buprestid beetles belonging to the genus *Melanophila* (Coleoptera, Buprestidae). *University of California Publications in Entomology*, **7**(1): 1–20.

Comments on the proposed conservation of the specific names of *Aphodius rufus* (Moll, 1782), *A. foetidus* (Herbst, 1783) and *Aegialia rufa* (Fabricius, 1792) (Insecta, Coleoptera)
(Case 2878; see BZN **51**: 121–127, 340–341)

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In their application Krell, Stebnicka & Holm seek to conserve the names *Aphodius rufus* (Moll, 1782) and *Aegialia rufa* (Fabricius, 1792), both originally described as *Scarabaeus rufus* and accordingly junior primary homonyms of *Scarabaeus rufus* De Geer, 1778 (currently known as *Disticha rufa*). Although there might once have been good reasons to conserve at least one of the names, it is my contention that the time for that is now long past. By following the Code we will now have a better chance of achieving stability in the nomenclature.

The first name in question is *Aphodius rufus*. This is a well known species and in the past known under that very name. However, almost 40 years ago Landin (1956) showed that the nomenclaturally correct name is *Aphodius scybalarius* (Fabricius, 1781). The correct name did not come immediately into use and at that time the case should have been brought to the Commission. No such action was undertaken and after a while *A. scybalarius* began to win ground. The application already lists a considerable number of papers using *A. scybalarius* and I can add, for example, Kumari (1985), Muona & Viramo (1986), Hansen & Pritzl (1987), Berlov (1989), Biström, Silfverberg & Rutanen (1991), Hanski & Cambefort (1991), Spuris (1991) and Miländer, Roosileht & Süda (1993).

The second name would probably never have reached the Commission on its own merits. The species was known in Europe as *Aegialia rufa* and in America as *Aegialia spissipes* LeConte, 1878, until Stebnicka (1977) synonymized them. It has hardly ever been mentioned outside taxonomy and faunistics. Either Europeans should get used to the American name, or Americans to the European one. As the former solution is in agreement with the Code our choice should be simple.

So far I have explained why I think the application is unnecessary. Actually I think its acceptance would be harmful for stability in nomenclature. Whenever a sufficiently important situation is found, where current use is threatened, an application should be made without too much delay, not when an ever-growing number of workers already have accepted the change. Were the Commission to approve this application it would encourage those who are lax in following the rules.

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Kumari, E. (Ed.). 1985. *Matsalu - rahvusvahelise tähtsusega märgala*. 309 pp. Valgus, Tallinn.

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Spuris, Z. 1991. Latvijas kukainu katalogs. 9. Skarabeju dzimta (Scarabaeidae). *Latvijas Entomologs*, **34**: 5–27.

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I disagree with the comments on this case by Dellacasa (published in BZN **51**: 340–341) and Silfverberg (above) on a number of points.

1. The nomenclatural problem with *Scarabaeus scybalarius* Fabricius, 1781, *S. rufus* Moll, 1782 and *S. rufus* Fabricius, 1792 still exists because the nomenclatural acts of Silfverberg (1977, 1979) have not been followed by subsequent authors. An act by a reviser which results in the transference of a well known binomen (*S. scybalarius*) from one well known species to another will never be accepted by a majority of succeeding authors, the more so because such an act works against stability and universality in scientific names and prevents the name of a taxon from being distinct and unique. As a result in this case we now have one binomen simultaneously naming two taxonomic species (those called *Scarabaeus rufus* by Moll, 1782 and *S. foetidus* by Herbst, 1783). Silverberg's sentence that 'after a while *A. scybalarius* [for *rufus* Moll] began to win ground' is misleading since this name (in the new sense) has not been winning supremacy. The nomenclatural chaos which exists will continue if *scybalarius* remains in use. Silfverberg's action meant the end of some formal problems but the beginning of a great number of practical ones.

2. Dellacasa's proposal (BZN **51**: 340, item (1)) to designate a neotype for *Scarabaeus scybalarius* Fabricius, 1781 is unecessary since a lectotype, designated by Landin (1956), already exists. The proposal would override Fabricius's original intention and in my view is not acceptable.

3. Dellacasa's proposed neotype designation for *scybalarius*, in order to make the name usable for the species correctly known as *Aphodius foetidus* (Herbst, 1783), would not end the confusion because (a) *scybalarius* has been used for two taxonomic species simultaneously for a number of years, and (b) a second transfer of the name from one species to another would cause as much confusion as the first, if not more.

4. In relation to Dellacasa's proposal (2)(b), the name *arcuatus* Moll in Schrank & Moll, 1785, published as *Scarabaeus arcuatus*, has been used at infrasubspecific rank by some authors (for example, Balthasar, 1964, p. 406; Dellacasa, 1983, p. 150; Bearaud, 1992, p. 135). Hence this name is not 'forgotten' but, as with most infrasubspecific names, is unfamiliar to most entomologists, in contrast to *Aphodius rufus* (Moll, 1782) which is well known (see para. 4 of the application). Conservation of the latter will, without doubt, stabilize the nomenclature.

5. In relation to Dellacasa's proposal (2)(c) and Silfverberg's comment, *Aegialia spissipes* Leconte, 1878 is also an unfamiliar name, in contrast to the well known *A. rufa* (Fabricius, 1792) (see para. 7 of the application). Conservation of the latter is also highly desirable.

6. I see no reason why Dellacasa's proposal (2)(a) should not be combined with the second part of his proposal (1), which applies for the conservation of *rufus* Moll, 1782 and *rufus* Fabricius, 1792. This would amount to the same as the proposals in our application.

Additional reference

Schrank, F. von P. & Moll, C.E. von. 1785. *Naturhistorische Briefe über Oesterreich, Salzburg, Passau und Berchtesgaden*, vol. 1. Mayer, Salzburg.

(3) Z.T. Stebnicka
Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Slawkowska 17, 31-016 Cracow, Poland

Opposition to comments by Dellacasa (BZN **51**: 340–341) and Silfverberg (above) has been expressed by Dr Krell (above). I would like to support Krell's arguments and to make some additional points.

The species currently known by the names *Aphodius rufus* (Moll, 1782), *A. foetidus* (Herbst, 1783) and *Aegialia rufa* (Fabricius, 1792) have appeared frequently in the primary literature. However, the names have been widely published and used not only in specialist publications but also in the literature dealing with ecology, faunistics and practical entomology. Dellacasa's and Silfverberg's comments are examples of a unilateral standpoint and of the (unfortunately frequent) disregard of the urgent need of the non-specialist for nomenclatural stability.

The species which concern us here are represented in a large number of museum collections around the world. Changing all the specimen records in these collections would seem to be a pointless task. The substitutions would not take effect because many taxonomists and non-taxonomists would continue to use the old terminology.

In accord with current usage and the maintenance of nomenclatural stability, and to avoid name changes and unnecessary confusion, I maintain the application as its co-author.

Comment on the proposed conservation of *Ischyrus*, *Lybas* and *Mycotretus* Lacordaire, 1842 and of *Megischyrus* Crotch, 1873 (Insecta, Coleoptera)
(Case 2885; see BZN **51**: 128–132)

Richard C. Funk
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After reading the application by Drs Skelley and Goodrich I am convinced that their proposals for stabilizing the nomenclature of the EROTYLIDAE are logical. I entirely support the case.

Comment on the designation of *Musca lancifer* Harris, [1780] as the type species of *Hydrophoria* Robineau-Desvoidy, 1830 (Insecta, Diptera), and proposal of a neotype for *M. lancifer*
(Case 2858; see BZN **51**: 28–30, 258–259)

D.M. Ackland
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Graham C.D. Griffiths
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In his comment on this case Crosskey (BZN **51**: 258–259) has suggested that a neotype should be designated for *Musca lancifer* Harris, [1780], the proposed type species for *Hydrophoria*, since Harris's illustration (p. 126, pl. 36, fig. 59) is inadequate to distinguish the taxon by modern standards. As mentioned by Crosskey and by Pont & Michelsen (1982) no Harris specimens of this (or other) species are known. We agree with Crosskey's suggestion, and propose that a male specimen in the Department of Entomology, The Natural History Museum, London should be designated as the neotype of *M. lancifer*. This specimen is labelled 'England, Surrey: Bookham Common, Broadway North, 25.x.1969, A.C. & B. Pont' and now, in anticipation of the proposal below, also 'NEOTYPE ♂ Musca lancifer Harris designated Ackland 1995'. It is in good condition, and the diagnostic genitalia (which are exserted) agree with those figured for *Anthomyia conica* Wiedemann, 1817 by Hennig (1969, pl. 31, fig. 372). Hennig was unaware that there are original specimens of *A. conica* in the Naturhistorischen Museum in Vienna (Lichtenberg, 1979, p. 8). The proposed *M. lancifer* neotype is in accord with the established concept of *A. conica*, which was synonymized with *M. lancifer* by Pont & Michelsen (1982). As mentioned in the application, *Hydrophoria* has long been used in the sense of *A. conica* although this was not an originally included nominal species.

In addition to the proposals on BZN **51**: 29–30, we ask the International Commission on Zoological Nomenclature to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Musca lancifer* Harris, [1780] and to designate as neotype the specimen referred to above.

Additional reference

Lichtenberg, R. 1979. Anthomyiiden-Typen und als Typen in Frage kommende Exemplare klassischer Sammlungen im Naturhistorischen Museum in Wien (Diptera, Calyptratae, Cyclorrhapha). *Kataloge der wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien*, **5** (Entomologie 3). 16 pp.

Comment on the proposed conservation of *Sicus* Scopoli, 1763 and *Myopa* Fabricius, 1775 by the designation of *Conops buccata* Linnaeus, 1758 as the type species of *Myopa*, and on *Coenomyia* Latreille, 1796 (Insecta, Diptera)
(Case 2881; see BZN **51**: 31–34, 259–261)

Anthea Gentry

The Secretariat, International Commission on Zoological Nomenclature, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

This comment has the endorsement of Dr Sidney Camras, the author of the application, who has seen and approved it.

Drs Curtis Sabrosky and Terry Wheeler have supported (BZN **51**: 259–261) the proposals to conserve the names *Sicus* Scopoli, 1763 and *Myopa* Fabricius, 1775. However, both authors have pointed out that the rejection of *Coenomyia* Latreille, 1796 should not have been proposed in the application (cf. paras. 6 and 7).

Both Sabrosky and Wheeler have noted that the type species of *Coenomyia* is *Musca ferruginea* Scopoli, 1763, and not *Sicus ferrugineus* Fabricius, 1798 as stated in the application, and that *Coenomyia* is therefore not a junior objective synonym of *Sicus* Scopoli, 1763. The '*Sicus ferruginea* F.' included as the single species in *Coenomyia* by Latreille (1802), and cited as the type species by Latreille (1810), is a subsequent usage of *Musca ferruginea* Scopoli, 1763, which is not the same species as *Conops ferruginea* Linnaeus, 1761 (= *Sicus ferrugineus* of Scopoli (1763) and *Myopa ferruginea* of Fabricius (1775)), the type species of *Sicus* Scopoli. The name *Coenomyia* is in use and refers to a genus with a widespread Holarctic distribution.

A report on dipteran names (BZN **18**: 9–64; 1960) prepared by the then Secretary to the Commission, Francis Hemming, erroneously recorded (p. 46) *Coenomyia* Latreille, 1796 as a junior objective synonym of *Sicus* Scopoli, 1763 and included it among '124 invalid generic names to be placed on the Official Index'. This error was corrected by Sabrosky in a comment published later in the same volume (BZN **18**: 228; 1961), who noted that *Musca ferruginea* Scopoli was the valid name for the type species of *Coenomyia*. Sabrosky designated the same nominal species, one of those originally included in *Sicus* Fabricius, 1798, as the type species of Fabricius's genus, rendering *Sicus* Fabricius a junior objective synonym of *Coenomyia* Latreille, 1796, as well as being a junior homonym of *Sicus* Scopoli, 1763.

Coenomyia should therefore not be rejected and should be placed on the Official List in addition to *Sicus* Scopoli, 1763 and *Myopa* Fabricius, 1775.

The International Commission on Zoological Nomenclature is accordingly asked:

(1) to place on the Official List of Generic Names in Zoology the name *Coenomyia* Latreille, 1796 (gender: feminine), type species by subsequent monotypy by Latreille (1802) *Musca ferruginea* Scopoli, 1763;

(2) to place on the Official List of Specific Names in Zoology the name *ferruginea* Scopoli, 1763, as published in the binomen *Musca ferruginea* (specific name of the type species of *Coenomyia* Latreille, 1796);

(3) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Sicus* Fabricius, 1798 (a junior objective synonym of *Coenomyia* Latreille, 1796 and a junior homonym of *Sicus* Scopoli, 1763).

Comment on the proposed conservation of the usage of the specific names of *Bombus terrestris* and *B. muscorum* (Linnaeus, 1758), *B. lucorum* (Linnaeus, 1761) and *B. humilis* Illiger, 1806 (Insecta, Hymenoptera)
(Case 2638; see BZN **51**: 232–236)

Hans Silfverberg
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This application concerning the *Bombus* species gets my full approval. I would find it most unfortunate if such well known names were transferred from one species to another — it would make usage of the literature extremely difficult.

Comment on the proposed designation of a neotype for *Coelophysis bauri* (Cope, 1887) (Reptilia, Saurischia)
(Case 2840; see BZN **49**: 276–279; **50**: 147–151, 236–239, 291–294; **51**: 48–51, 156–158, 265–266)

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I wish to add to my previous comment (BZN **50**: 150–151) on this case, particularly on the nature of Cope's original material and Colbert's (1989) interpretation of it, the alternative *Coelophysis bauri* (Cope, 1887) neotype suggested by Hunt & Lucas (1993), and Paul's (1993) placement of the Ghost Ranch specimens in *Syntarsus* Raath, 1969.

1. There has been some confusion regarding what constitutes the type material of *C. bauri*. Padian (1986, p. 46) listed those specimens which are the type series for the nominal species *Coelurus bauri* and *C. longicollis* Cope, 1887. These specimens include AMNH 2722 (the sacrum designated as *C. bauri* lectotype by Colbert, 1989). As mentioned by Colbert (1989), later in 1887 Cope described further material, transferred *C. bauri* and *C. longicollis* to *Tanystrophaeus*, and described a third species, *T. willistoni*. In 1889 all three were placed in the new genus *Coelophysis*, of which *C. bauri* was designated the type by Hay (1930).

2. Colbert (1989) synonymized *C. longicollis* and *C. willistoni* with *C. bauri*, although without justification. He wrongly regarded some of the specimens described only in Cope's second paper as part of the type series of *C. bauri*. Only a few of the Cope specimens share common elements, and the material is too fragmentary and incomplete to permit comparison, let alone establish synonymy. The names *C. bauri*, *C. longicollis* and *C. willistoni* are nomina dubia and can only be applied to their type material.

3. Hunt & Lucas (1993) designated AMNH 2724, a pubic fragment referred to *C. bauri* by Cope in his second 1887 paper and also by Colbert (1989), as the 'neotype' of the species, even though they acknowledged that it was not part of the originally described material. In any event the designation would be invalid since Colbert (1989) had already designated AMNH 2722 as lectotype. Hunt & Lucas noted that AMNH 2724 possessed a 'pubic foramen ... which could be a diagnostic

feature'. I have determined that this is actually the obturator foramen, a character which is present in the holotype of *Rioarribasaurus colberti* (AMNH 7224; personal observation), *Liliensternus liliensterni*, *Syntarsus rhodesiensis* (Raath, 1969, p. 15, fig. 4b), and also in *S. kayentakatae* to which a number of Ghost Ranch specimens can be tentatively referred (personal observation).

4. There is now strong evidence (Sullivan, 1994) that suggests that the type material of *C. bauri* did not come from the Ghost Ranch (Whitaker) quarry. Moreover, my preliminary study of the Ghost Ranch specimens strongly suggests that two closely related yet distinct taxa (*Rioarribasaurus* and *Syntarsus*) are represented there. Colbert's (1989) concept of *Coelophysis bauri* is most likely a composite of these; this would explain the unexpected morphological variation cited by him (1989, p. 132; 1990, p. 89) amongst the Ghost Ranch theropods. The original Cope material could belong to either.

5. Paul (1993, p. 400) recognized *C. bauri* as a nomen dubium. The characters he (or for that matter Colbert, 1989) used to recognize *Rioarribasaurus* (or *Coelophysis*) and *Syntarsus* are ambiguous, and Paul's synonymy of these taxa is unjustified. However, I believe *some* of the Ghost Ranch specimens can be referred to *Syntarsus*; I base this on my studies of the type material of *C. bauri*, the holotype of *R. colberti*, and other specimens in blocks at the American Museum of Natural History, Carnegie Museum of Natural History, Yale Peabody Museum of Natural History and The State Museum of Pennsylvania.

6. In conclusion, (i) the type material of *Coelophysis bauri* (and of *C. longicollis* and *C. willistoni*) is undiagnostic; (ii) the 'neotype designation' by Hunt & Lucas (1993) is doubly invalid; (iii) there are two distinct theropod taxa (*Rioarribasaurus* and *Syntarsus*) among the Ghost Ranch specimens, and the type material of *C. bauri* may belong to either.

Additional references

Colbert, E.H. 1990. Variation in *Coelophysis bauri*. Pp. 81–90 *in* Carpenter, K. & Currie, P.J. (Eds.), *Dinosaur systematics: perspectives and approaches*. Cambridge University Press, Cambridge.

Hunt, A.P. & Lucas, S.G. 1993. Triassic vertebrate paleontology and biochronology of New Mexico. Pp. 49–60 *in* Lucas, S.G. & Zidek, J. (Eds.), *Vertebrate paleontology in New Mexico*. Bulletin 2, New Mexico Museum of Natural History and Science, Albuquerque.

Sullivan, R.M. 1994. Topotypic material of *Coelophysis bauri* (Cope) and the *Coelophysis-Rioarribasaurus-Syntarsus* problem. P. 48A *in* Abstracts of Papers, *Journal of Vertebrate Paleontology*, **14**(3)(Supplement).

Comments on the proposed conservation of the specific name of *Liophis poecilogyrus* (Wied-Neuwied, [1824]) (Reptilia, Serpentes)

(Case 2875; see BZN **51**: 250–252)

(1) Laurie J. Witt
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I am in complete agreement with the application by Drs Smith, Dixon and Wallach. If one of the disused senior synonyms were introduced an incredible

confusion would result in future literature, since *L. poecilogyrus* has been used in many taxonomic and ecological publications (including some of mine). It would require all ecologists referring to the species to trace the history of name use, and that is unlikely to happen. I trust the Commission will approve the application.

(2) Support for the application has also been received from Edwin L. Bell (*Albright College, P.O. Box 15234, Reading, Pennsylvania 19612 5234, U.S.A.*) and from Kenneth L. Williams (*Department of Life Science, Northwestern State University of Louisiana, Natchitoches, Louisiana 71497, U.S.A.*).

Comments on the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*
(Case 2928; see BZN **51**: 135–146, 266–267, 342–348)

(1) Alvaro Mones
Museo Nacional de Historia Natural, Casilla de Correo 399, 11000 Montevideo, Uruguay

I completely agree with the proposal to conserve 11 of Brisson's mammal generic names and hope that it will be accepted by the Commission.

My special concern is *Hydrochoerus* Brisson, 1762. The living capybara has received several different generic names, most of them being orthographical variations such as *Hydrochoerus* Brisson, 1762, *Hydrochaeris* Brünnich, 1771, *Hydrochaerus* Erxleben, 1777, *Hydrochoeris* Allen, 1916 and *Hydrocheirus* Hollande & Batisse, 1959, as well as other names such as *Capibara* Moussy, 1860 and *Capiguara* Liais, 1872. Many of these names have been used only once or very seldom in the extensive bibliography on the family HYDROCHOERIDAE.

Before the publication of Cabrera's (1961) *Catálogo de los mamíferos de América del Sur*, and despite the differences in spelling, all references to *Hydrochoerus* were cited with Brisson's authorship. Following Cabrera's influential work (and not Hopwood's 1947 rediscovery of Brünnich's *Zoologiae Fundamenta*) some authors adopted Brünnich's name, but many others continued to use Brisson's. I have repeatedly defended the latter course (Mones, 1973, 1984, 1991; Mones & Ojasti, 1986), my main argument being the extensive use of *Hydrochoerus* Brisson, 1762 by almost all authors before Cabrera's work, and by a significant number of workers after it. Moreover, the suffix *-choerus*, and not *-chaeris*, is consistently used for many other names of related genera (for example, *Protohydrochoerus* Rovereto, 1914, *Neochoerus* Hay, 1926, *Hydrochoeropsis* Kraglievich, 1930, *Xenohydrochoerus* Rusconi, 1934, *Nothydrochoerus* Rusconi, 1935, *Prohydrochoerus* Spillmann, 1941, *Anatochoerus* Vecetich & Mones, 1991).

As a student who has been working with Recent and fossil capybaras for the last 30 years, I deeply agree with, and emphatically support, Gentry's application, not only for the name of the capybara but also for the remaining generic names. I am convinced that approval by the Commission will bring stability to the nomenclature.

Additional references

Mones, A. 1973. Estudios sobre la familia Hydrochoeridae (Rodentia). 1. Introducción e historia taxonómica. *Revista Brasileira de Biologia*, **33**(2): 277–283.

Mones, A. 1984. Estudios sobre la familia Hydrochoeridae (Rodentia), XIV. Revisión sistemática (Mammalia: Rodentia). *Senckenbergiana Biologica*, **65**(1–2): 1–17.
Mones, A. 1991. Monografía de la familia Hydrochoeridae (Mammalia: Rodentia). *Courier Forschungsinstitut Senckenberg*, **134**: 1–235.
Mones, A. & Ojasti, J. 1986. *Hydrochoerus hydrochaeris*. *Mammalian Species* (American Society of Mammalogists), **264**: 1–7.

(2) Francis Petter
'Mammalia' (Morphologie, Biologie, Systématiques des Mammifères), 55 rue de Buffon, 75005 Paris, France; Laboratoire de Zoologie des Mammifères, Muséum National d'Histoire Naturelle, 55 rue de Buffon, 75005 Paris, France

Comme l'éditeur de *Mammalia* je suis formellement d'accord avec la conservation des 11 noms de genre de Brisson (1762) et la réjection de *Regnum Animale*, Ed. 2 (M.J. Brisson, 1762). L'argumentation (Case 2928) me paraît tout-à-fait valable.

Mes collègues du Laboratoire de Zoologie des Mammifères sont également de l'avis qu'il faut conserver ces 11 noms. Nous souhaitons vivement qu'une décision dans ce sens soit prise et qu'elle soit définitive.

(3) Alan Turner
Department of Human Anatomy and Cell Biology, The University of Liverpool, P.O. Box 147, Liverpool L69 3BX, U.K.

I write in support of the conservation of generic names from Brisson's *Regnum Animale*.

I am in favour of maintaining established usage in nomenclature, and find no problem with agreeing to the use of the Commission's plenary powers to conserve names in a rejected work. Furthermore, I find no merit in attributing Brisson's names *Hyaena*, *Lutra* and *Giraffa* to Brünnich (1771).

(4) Alfred L. Gardner
National Biological Survey, MRC 111, National Museum of Natural History, Washington, DC 20560, U.S.A.

Brisson (1762) is a partial reprinting (with emendations and additions by the publisher) of a non-binominal publication; therefore, an unavailable work and the names contained therein are not available for purposes of nomenclature. This is the nearly universal conclusion of all who have examined Brisson's *Regnum Animale*, Ed. 2, despite Tate's hope to conserve certain names of genera in his favourable comparison of the work with Brisson's (1760) independent publication on birds (also non-binominal). The problem is adequately outlined by Gentry in the application; however, while I agree with rejecting Brisson (1762), I disagree with conserving the 11 names she proposes. I recommend placing Brisson's work on the Official Index and treating all of his names (excepting *Odobenus*; see Opinion 467) as unavailable.

Part of my disagreement with Gentry's application stems from the fact that, as one begins to explore nomenclatural issues, one soon learns that rejection of names from pre-1758 and non-binominal works, coupled with the Principle of Priority, are

primary bases for a stable nomenclature. In the majority of the cases, a disruption caused by a change in a familiar scientific name is short-lived. Young workers quickly learn the new combinations; experienced authors who are aware of scientific names know the basis for the change. I suspect that most non-systematists who profess displeasure at what seems to them to be 'instability' are uneasy with scientific names in general and believe nomenclatural issues to be arcane and incomprehensible.

The case concerning Brisson's names is fraught with the problems caused by ignorance, human error, and other behaviors such as uncritically following earlier usage, reluctance to 'rock the boat', or the propensity to prefer the familiar whether valid or not, that confound the meaning of 'accepted', 'common' or 'universal' usage. That a problem exists today stems partially from the lack of decisive action by the Commission on Tate's query in 1938. In all fairness, however, the Commission recognized the unavailability of names from Brisson (1762) in Opinion 90, Direction 79 and Opinion 467, the latter conserving *Odobenus* Brisson, 1762 under the plenary powers of the Commission.

My additional comments are keyed to the numbered sections in Gentry's application.

Para. 2. If Brisson (1762) is not an available work and hence the names contained therein are not available, why must the Commission make a formal decision on its availability before the work is rejected? A knowledgeable worker simply should not use any of Brisson's names (except for *Odobenus*, conserved by the Commission under the plenary powers).

Para. 3. Twentieth century authors using names from Brisson were undoubtedly influenced by Merriam (1895) and Sherborn (1902). Examples were Palmer (1904), Miller (1924) and Miller & Kellogg (1955). Merriam recognized that Brisson (1762) was not consistently binominal, yet (with the exception of *Philander*) he believed that 11 generic names in the keys (pp. 12–13, 218) given for the first time were available and warranted recognition. Merriam designated type species for each genus on tautonymy or monotypy, with the exception of *Cuniculus* (its type selected by elimination). Although best remembered for contributions in mammalogy and his Life Zone System, Merriam's early work was with birds. Certainly Merriam was familiar with the widespread use of Brisson's generic names for birds; thus he may have been inclined to accept Brisson's generic names for mammals. Sherborn (1902) believed Brisson's genera to be available only from the Index. Neave (1939–1940) likely followed Sherborn's lead. However, as pointed out by Hopwood (1947), both the keys and Index are the same as the Latin forms published in the original 1756 edition; hence, the names are not available. There are other significant works in addition to those cited by Gentry that treated Brisson's names as unavailable. Those having the greatest influence in the Western Hemisphere are Cabrera (1957–1961), Hall & Kelson (1959) and Hall (1981).

Para. 5. *Philander*. Hershkovitz (1949) rejected *Philander* Brisson as non-Linnaean and designated *Philander virginianus* (= *Didelphis opossum* Linnaeus, 1758) as the type species of *Philander* Tiedemann, 1808. Later, Hershkovitz (1976) selected the female that Seba (1734) had illustrated as the lectotype of Tiedemann's *Philander virginianus*, thereby retaining *Philander* Tiedemann for the gray and black opossums. I cannot see how attributing the authorship of *Philander* to Brisson furthers 'the interest of stability of nomenclature'.

Glis. The information presented by Wahlert, Sawitzke & Holden (1993) in their argument for the use of *Myoxus* Zimmermann, 1780 provides ample evidence supporting this as the valid name for edible dormice. I recommend rejecting *Glis* Brisson.

Cuniculus. Using the American Ornithologists' Union Code Merriam (1895) fixed the type as '*Cuniculus cauda longissima* Brisson (= *Dipus alactaga* Olivier, 1800)' by elimination. Hollister (1913) dissented 'because *C. cauda longissima* was placed in brackets at the end of the series; and the introduction [by the publisher] to the work explains that species so placed [by the publisher] were doubtfully referred to the genus'. Hollister fixed the type as 'paca' (= *Mus paca* Linnaeus).

Tate (1939) used *Cuniculus* Brisson for the pacas with the reference (p. 183, footnote) 'Opinion 90, International Commission on Zoological Nomenclature'. However, this Opinion does not conserve the name. Earlier in the same report Tate did not use *Philander* Brisson but noted 'the generally used term [*Metachirops*] is here retained pending some opinion from the International Commission'. Most subsequent workers either apparently overlooked this statement or assumed that Opinion 90 conserved *Cuniculus* Brisson, 1762. However, this Opinion pointed out the lack of consensus on the availability of *Cuniculus* Brisson with the statement that 'certain authors do not accept Brissonian names'.

Agouti Lacépède, 1799 is the available and approriate name for the pacas. The argument that the name will cause confusion because the common name agouti is applied to *Dasyprocta* is true primarily for users of the English common name. While the Spanish version (agutí) is heard, vernacular names such as picuré, cotia, guatín and acuré are among those in more common usage.

Hoffmann (in Wilson & Reeder, 1993, p. 822) cited *Cuniculus* Meyer, 1790 as a synonym of *Oryctolagus* Lilljeborg, 1874. This either was a *lapsus* or an attempt at the moment to avoid controversy. Clearly, *Oryctolagus* enjoys common usage and to change the name at this late date may be confusing, at least for a few years. If interested persons wish to continue using *Oryctolagus*, the easiest solution is to petition the Commission to suppress *Cuniculus* Meyer, 1790. This action is infinitely more desirable than to validate an unavailable name (*Cuniculus* Brisson) for another taxon in order to make *Cuniculus* Meyer invalid by homonymy.

Pteropus, *Meles*, *Hydrochoerus*, *Lutra*, *Hyaena*, *Tapirus*, *Giraffa*. The name *Pteropus* is available from Erxleben (1777), *Meles* is available from Boddaert (1785), and the remaining are available from Brünnich (1771). Nothing is to be gained by conserving these names from Brisson (1762).

Tragulus. The situation with *Tragulus* is more complicated than with the other names under discussion. Considering the numerous and conflicting designations of type species for *Tragulus* (of authors), the simplest and least disruptive resolution of this problem is to date *Tragulus* from Pallas (1767), with type species *Cervus javanicus* Osbeck, 1765. This is the usage employed by Honacki et al. (1982) and Grubb (in Wilson & Reeder, 1993), except that they and Hopwood (1947) dated *Tragulus* Pallas from 1779 (fasc. 13). Another, but less satisfactory, resolution is to date *Tragulus* from Boddaert (1785). This would require setting aside Hopwood's (1947) designation of *Tragulus pygmaeus* Boddaert (= *Capra pygmaea* Linnaeus) as the type species of *Tragulus* and designating *Moschus meminna* Erxleben, 1777 as the type. This could be justified on *Tragulus* Boddaert having been defined as lacking horns,

whereas *Capra pygmaea* (= *Neotragus pygmaea*) is a horned African antelope. *Moschiola* 'Hodgson, 1843' would become a junior objective synonym of *Tragulus* Boddaert (redefined). Of course, *Tragulus* Brisson could be conserved under the plenary powers if the Commission follows the course recommended by Gentry; *Odobenus* Brisson has already been conserved. However, if *Tragulus* Brisson were conserved, then Merriam's designation of *Capra pygmaea* as the type species would be valid and *Tragulus* Brisson would become a senior synonym of *Neotragus*. I argue against conserving *Tragulus* Brisson.

Para. 7. While it is true that some of Brisson's names have been uncritically used for many years, there have been a number of workers during the past century that have commented on the non-availability of the same names. Trouessart (1897–1899) clearly rejected Brisson's generic names and cited them with the date 1756. To say that the names were accepted by Simpson (1945) means little except that Simpson was interested in mammalian phylogeny and relationships and showed little concern over nomenclatural matters. Furthermore, being at the American Museum of Natural History, Simpson certainly was aware of Tate's belief that if Brisson's (1760) names for birds were acceptable, then Brisson's names for mammals should also be conserved. The comprehensive nomenclator of Schulze, Kükenthal & Heider (1929) clearly indicated the non-available status of each of Brisson's generic names. Several of the references cited by Gentry as reflecting accepted usage of the names contain comments on the uncertain or non-available status of Brisson's names. The fact that these authors continued to use names that they knew were not available does not speak well of their scholarship and regard for rules of nomenclature.

Para. 8. I agree only that, once and for all, Brisson's (1762) *Regnum Animale* be rejected for nomenclatural purposes.

Para. 9. Obviously I do not believe that these recommendations are in the best interests of mammalian nomenclature.

(5) F. de Beaufort, L. Granjon, J.M. Pons & M. Tranier
Laboratoire de Zoologie, Mammifères et Oiseaux, Muséum National d'Histoire Naturelle, 55 rue de Buffon, 75005 Paris, France

En réponse aux suggestions de A. Gentry à la CINZ concernant le travail de Brisson (1762), nous exprimons ci-après une opinion concernant la validité de l'ouvrage (point 9(1)), et l'opportunité de maintenir les onze noms de genres en question (point 9(2)).

Il nous paraît souhaitable de ne pas invalider l'ouvrage dans sa totalité, pour les raisons suivantes:

Cet ouvrage représente un jalon important dans la mise en ordre de la nomenclature zoologique. Une bonne partie des noms de genres proposés par Linné était inappropriée, alors que la grande majorité des noms de genre proposés ensuite par Brisson étaient pertinents et ont été repris constamment depuis le 18ème siècle (*Philander* pour *Didelphis*; *Pteropus* pour *Vespertilio*; *Glis* pour *Sciurus*; *Cuniculus* pour *Mus*; *Hydrochoerus* pour *Sus*; *Meles* pour *Ursus*; *Lutra* pour *Mustela*; *Hyaena* pour *Canis*; *Tapirus* pour *Hippopotamus*; *Tragulus* pour *Cervus*; *Giraffa* pour *Cervus*). Par ailleurs, il convient de souligner que l'ouvrage de Brisson (1760) concernant les

oiseaux, bien que jugé moins bon que l'edition de 1762 sur les mammifères par Hemming (lettre à Tate, 1945) a été valide (Opinion 37 de 1911 et Direction 16 de 1955).

D'autre part, nous observons que l'Article 11c du Code international nomenclature zoologique offre une version française plus souple que la version anglaise. En effet, l'ouvrage de Brisson peut être considéré comme 'coherent' (au sens du texte français) même s'il n'a pas intégralement ('consistently') suivi les règles de nomenclature binominale. Finalement, il nous paraît excessif de rejeter la totalité de l'ouvrage à cause d'une petite proportion d'irrégularités par rapport aux règles de la nomenclature, ne représentant finalement que des erreurs de forme alors que le contenu scientifique du travail de Brisson a été consacré par la postérité et l'usage.

Concernant la décision de maintenir Brisson (1762) en tant que premier descripteur pou les onze genres de mammifères en question, elle nous paraît tout-à-fait justifiée et dans la continuité de celle prise en 1957 (Opinion 467) concernant le genre *Odobenus*. Comme précisé ci-dessus, tous ces noms ont ensuite été consacrés par l'usage, la plupart du temps d'ailleurs par des contemporains de Brisson, et de plus des espèces types linnéennes ont été désignées par Merriam en 1895 pour ces genres. Les invalider n'aboutirait finalement qu'au remplacement de *Glis* par *Myoxus* et *Cuniculus* par *Agouti*, changements qui ne nous paraissent ni judicieux ni souhaitables.

(6) Clyde Jones
Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409, U.S.A.

I write to comment on the proposed rejection of Brisson's (1762) *Regnum Animale*, with the conservation of 11 generic names of mammals.

If, indeed, a major function of the Code is to '... provide for consistency ... and to preserve stability of nomenclature', then I must disagree with portions of the application. Most recent authors have considered Brisson (1762) unavailable for nomenclatural purposes; formal acceptance of this consideration by the Commission would benefit mammalian nomenclature. I therefore urge the Commission to reject Brisson (1762) with no qualifying conservation of generic names.

(7) N. Sivasothi
Department of Zoology, National University of Singapore, Kent Ridge 0511, Republic of Singapore

I have been working mainly with otters in Malaysia and Singapore since 1990 and am a member of the IUCN/SSC Otter Specialist Group. I strongly support the application which is a welcome and logical course of action.

1. The authorship of the genus *Lutra* will not affect the general user of the name. However, *Lutra* Brisson, 1762 is well known among taxonomists and has been adopted in authoritative works such as Ellerman & Morrison-Scott (1951, p. 275) and Harris (1968, p. 138). Workers in the field, such as myself, have followed these authors.

2. The first authority who recognised and named the distinct taxon should be credited with authorship. In the case of all the 11 genera mentioned in the application Brisson (1762) was the first to do so.

3. A decision by the Commission on Brisson's (1762) work *Regnum Animale* would be welcome. In the absence of previous action its rejection has been subjectively assumed by some authors, particularly in the light of comments made by Hemming (1955), which has resulted in some confusion. For example, reviewers in Honacki, Kinman & Koeppl (1982, p. 257) preferentially used *Lutra* Brünnich, 1771. They supported this decision by stating that Brisson's publication 'was ruled an unavailable work', in a misinterpretation of Hemming (1955). Unfortunately, this error is perpetuated in the recent second edition (Wilson & Reeder, 1993, pp. 311–312).

4. In Honacki et al. (1982), Brisson's (1762) authorship for the other genera was dismissed, either as a personal opinion of the reviewer or by citing Hemming (1955). Whilst I am unable to comment at length about the other names, the same arguments as above apply. Furthermore, the family name of at least two groups would be affected by the rejection of Brisson's names.

Additional references

Harris, C.J. 1968. *Otters: a study of the Recent Lutrinae*. 397 pp. Weidenfeld & Nicolson, London.

Hemming, F. 1955. Second report on the status of the generic names '*Odobenus*' Brisson, 1762 and '*Rosmarus*' Brünnich, 1771 (Class Mammalia) (A report prepared at the request of the Thirteenth International Congress of Zoology, Paris, 1948). *Bulletin of Zoological Nomenclature*, **11**: 196–198.

(8) Judith L. Eger
Department of Mammalogy, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6

I agree that the stability of mammalian nomenclature is best served by rejecting Brisson (1762) but do not agree with Gentry's proposal to conserve the 11 generic names. Nine of these names are available from other authors and there is no need to make them exceptions. Of the remaining two names, *Myoxus* Zimmermann, 1780 already has been accepted in place of *Glis* by most authors (Walker, 1975; Honacki, Kinman & Koeppl, 1982; Wilson & Reeder, 1993; Wahlert, Sawitzke & Holden, 1993) and recognised as an alternative generic name by others (Corbet & Hill, 1986, 1991). Clearly there is no need to conserve *Glis*.

Similarly, most recent authors have rejected *Cuniculus* and have used *Agouti* Lacépède, 1799 for the pacas. If mammalogists wish to continue using *Oryctolagus* Lilljeborg, 1874 for the European rabbit, the most parsimonious approach is to request the Commission to suppress *Cuniculus* Meyer, 1790.

Although *Odobenus* Brisson, 1762 was conserved as the generic name for the walrus (Opinion 467) it should not be considered a precedent for conserving other generic names. For example, the name *Papio* P.L.S. Muller, 1773 and 'all uses prior to the publication of *Papio* Erxleben, 1777' (which included *Papio* Brisson, 1756, 1762) were suppressed in Opinion 1199 (March 1982) for the purposes of priority and homonymy. Brisson's *Papio* was based on five references, all pre-1758, clearly indicating the problem of accepting non-binominal publications.

I hope that the Commission will reject Brisson's (1762) publication, without conservation of the 11 generic names.

(9) Bernard Sigé
Institut des Sciences de l'Evolution, Laboratoire de Paléontologie (Case 64), Université des Sciences et Techniques du Languedoc, Place Eugène-Bataillon, F-34095 Montpellier, Cedex 5, France

As a palaeontologist specialising in early Tertiary mammals, among them bats, I firmly defend the proposition to conserve Brisson's (1762) 11 mammalian generic names. They relate to universally known animals, unequivocally understood under their classical names.

Regarding the fruit bat genus *Pteropus* Brisson, 1762, often known as the 'flying fox', the name has full practical value, has been used without problem by all authors since Anderson's (1912) fruit bat catalogue, and carries knowledge of the morphology, biogeography and phylogeny. There would be no gain at all in exchanging this name and authorship for another.

Since stability and universality are the leading virtues promoted by the Commission, I hope for the wise conservation of what is clear and helpful in science, instead of the promotion of darkness and fruitless complexity.

(10) Mary Ellen Holden
Department of Mammalogy, American Museum of Natural History, Central Park West at 79th Street, New York, N.Y. 10024–5192, U.S.A.

I am writing about the application to conserve 11 of Brisson's (1762) mammal generic names, including *Glis*. I object to the proposal for the reasons outlined below.

1. Objection to the general argument. The argument given for the conservation of these 11 names is based upon 'established usage'. If this criterion is sufficient to establish the validity of a name, why does there exist a detailed Code that clearly describes the criteria for determining oldest available names for taxa? Should the Code be ignored when it is more convenient to do so, or should the Code be the consistent guidelines by which nomenclatural decisions are made? I favor the latter, so that decisions are not made simply on common usage of a name in a particular window of time, but are made to reflect the entire nomenclatural history of a given group. Anyone who specialises in a particular group will by definition need to have surveyed the older literature of that group, and hence would already be familiar with the range of names historically applied to the taxon of interest.

2. Objection to conservation of *Glis*, and in particular its application to dormice. Holden (in Wilson & Reeder, 1993) and Wahlert, Sawitzke & Holden (1993) have already published arguments as to why GLIRIDAE and *Glis* are not valid for dormice. The components of those arguments are summarized and elaborated upon below.

(a) Brisson's (1962) names are unavailable because his work does not satisfy the Principle of Binominal Nomenclature, as stated in the Code, Article 5a and its application Article 11c. Trouessart (1898, p. 453) and Schulze, Kükenthal & Heider

(1929, p. 1375) rejected *Glis* on the grounds that Brisson's work is not binominal (see Wahlert et al., 1993), as did Hopwood (1947).

(b) As noted by Hopwood (1947), *Glis* is valid in Erxleben (1777) for marmots, ground-squirrels, voles and lemmings, rendering *Glis* Storr, 1780 (which included pedetids, dormice and other rodents) invalid. The oldest available name in the sense of *Glis* Brisson is *Myoxus* Zimmermann, 1780, adopted in Linnaeus (1788) for dormice, and the correct family name for dormice is MYOXIDAE (see Holden, 1993). Palmer (1899) proposed the family name MUSCARDINIDAE because *Glis* was unavailable due to its previous application to other groups, but MUSCARDINIDAE is a junior synonym of MYOXIDAE.

(c) Gentry's assertion that *Glis* has had 'established usage for over 230 years' is incorrect. As can be verified by perusing the literature, and the *Zoological Record* until 1945, MYOXIDAE and *Myoxus* were the preferred names for the family and genus. As was explained in Wahlert et al. (1993), GLIRIDAE has only been the most commonly used family name for dormice since 1945 (50, rather than 230, years). The preference for GLIRIDAE over MYOXIDAE (and *Glis* over *Myoxus*) arose with Simpson's (1945) classification of mammals; this work was cited in the *Zoological Record* for the year 1945, and the change of that publication's usage from MYOXIDAE to GLIRIDAE occurred in that volume (see Wahlert, 1993). Some examples of prominent authors who used MYOXIDAE prior to the publication of Simpson's work are Gill (1872), Gray (1821), Waterhouse (1839), Lydekker (1896) and Trouessart (1898).

Dr Malcolm McKenna is completing a revision of Simpson's (1945) classification of mammals, and is recognising *Myoxus* and MYOXIDAE as the valid generic and family names, based on his independent research. The fact that a revision of the work that engendered the common misuse of *Glis* and GLIRIDAE for the last 50 years is finally correcting the misuse should carry some weight in a decision on whether or not *Glis* should be conserved.

(d) Despite common usage of *Glis* in the post-1945 literature, I have yet to meet a researcher from any country interested in dormice who was not familiar with all three family names (GLIRIDAE, MUSCARDINIDAE and MYOXIDAE).

(e) The common name of *Myoxus* (*Glis*) is the edible dormouse, and hence no public or amateur confusion will result from a ruling favoring the adoption of the valid generic name *Myoxus*. Though some workers feel that this is important in nomenclatural decisions, I do not give this consideration high priority, but it is an added bonus in this case.

For the reasons outlined above, I strongly object to the conservation of *Glis*, and if it is nonetheless conserved, I object to its being applied to dormice due to its previous application by Erxleben (1777) to other groups.

Additional references

Gill, T. 1872. Arrangement of the families of mammals with analytical tables. *Smithsonian Miscellaneous Collections*, **11**: 1–98.

Lydekker, R. 1896. On the affinities of the so-called giant dormouse of Malta. *Proceedings of the Zoological Society of London*, **1895**: 860–863.

Palmer, T.S. 1899. The family name of the dormice. *Science*, (n.s.)**10**(247): 412–413.

Waterhouse, G.R. 1839. Observations on the Rodentia with a view to point out the groups, as indicated by the structure of the crania, in this order of mammals. *Magazine of Natural History*, (n.s.)**3**: 184–188.

(11) Stéphane Aulagnier
Institut National de la Recherche Agronomique, Institut de Recherche sur les Grands Mammifères, C.R.A. Toulouse, B.P. 27, 31326 Castanet-Tolosan, Cedex, France

I write concerning the application dealing with the names of some mammalian genera.

As a mammalogist (not 'merely' a taxonomist) I do not find it desirable to change the commonly used names and/or authorship for these genera, particularly for the edible dormouse and the European badger. For a long time these taxa have carried the same name for the genus as for the species (i.e. *Glis glis* and *Meles meles*), which is the logical binomen for the type species. These two cases are the most critical since the animals are widely spread in Europe and so are cited under Brisson's (1762) names in many books and papers. Moreover, they are the type genera of a family and a subfamily, with the major consequence that a change in the higher nomenclature will follow a change in the generic name (cf. Wilson & Reeder, 1993), making life more difficult for nearly all mammalogists.

(12) G.B. Corbet
c/o Department of Zoology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.; Little Dumbarnie, Upper Largo, Fife KY8 6JQ, U.K.

I strongly support this case. With all of the 11 generic names of Brisson (1762) conserved the application would have served to stabilize names that are in current, unambiguous use.

In the case of *Glis*, the extensive European literature on this predominantly European monospecific genus has used *Glis* almost consistently since Miller (1912). Recent listings as *Myoxus* in American compilations (Honacki, Kinman & Koeppl, 1982; Wilson & Reeder, 1993) were based upon the rejection of all names from Brisson (1762), but the consequences of doing so were not consistently followed by these compilers. In particular, rejection of *Cuniculus* Brisson, 1762 for the paca (a senior homonym of *Cuniculus* Meyer, 1790) would threaten the name *Oryctolagus* Lilljeborg, 1874 for the European rabbit, a name used universally in the vast literature for over a hundred years. The rejection of *Tragulus* Brisson, 1762 would be equally disruptive of other well established names. Although these threatened names could be conserved independently, the current proposal to solve the problem *en bloc* by conserving these names of Brisson (1762) seems an eminently satisfactory solution.

Additional reference

Miller, G.S. 1912. *Catalogue of the mammals of western Europe*. British Museum (Natural History), London.

(13) Jean-Louis Hartenberger
Institut des Sciences de l'Evolution, Laboratoire de Paléontologie, Université des Sciences et Techniques du Languedoc (Montpellier 11), Case Courier 064, Place Eugène-Bataillon, F-34095 Montpellier Cedex 5, France

I support vigorously the proposition to conserve the 11 generic names first published by Brisson (1762).

The Preamble to the Code (p. 3) is very clear: 'The object of the Code is to promote stability and universality in the scientific names of animals ...'. Everyone should conclude that stability is the first and most important purpose of the Code and this must surely be in the minds of all scientists. However, I am sure that if this year there is a rejection of Brisson's 11 names, next year other workers in another group will propose the rejection of some other well known and very significant names for parallel reasons. The kind of publication which upsets long-established nomenclature is not 'science' for me.

I recently gave a paper (1994) to a Congress in which I reported that from Roman times the Latin name *Glis* has denoted the edible dormouse. This might be considered an unorthodox reason for conserving the name, but it is nevertheless clear that from as long ago as this epoch this small animal was known by this name, and no one could claim that there is a risk of a mistake concerning the taxon.

I am a palaeontologist (and joint editor of *Journal of Mammalian Evolution*) and the use of GLIRIDAE as a family name is found in old (with very few exceptions) and all recent papers. My 1994 publication lists 12 works dating from 1967 to 1991 in which the name appears *in the title*. To my knowledge all authors who have published papers on fossil dormice during the last 50 years have used *Glis* and GLIRIDAE. There are also many fossil taxa with names coined from *Glis* (GLIRAVINAE, *Pentaglis*, etc.).

Additional reference

Hartenberger, J.-L. 1994. The evolution of the Gliroidea. Pp. 19–33 *in* Tomida, Y., Li, C.K. & Setoguchi, T. (Eds.), *Rodent and lagomorph families of Asian origins and diversification*. National Science Museum Monograph No. 8. Tokyo.

(14) Hans de Bruijn

Department of Stratigraphy/Paleontology, Institut voor Aardwetenschappen, Universiteit Utrecht, Budapestlaan 4, 3508 TA Utrecht, The Netherlands

I fully support the application to conserve 11 of Brisson's (1762) generic names.

Discarding *Glis* Brisson as in Holden (in Wilson & Reeder, 1993) is not desirable and, in my opinion, this action abuses the intention of the Code.

In a forthcoming publication (1995, in press) on the classification of the GLIRIDAE, Dr Remmert Daams (*Depto. de Paleontologia, Facultad de Ciencias Geológicas, Ciudad Universitaria, Madrid, Spain*) and I have set out the history of the names *Glis* and GLIRIDAE and urged their continued usage. We have noted: 'Holden (1993) and Wahlert, Sawitzke & Holden (1993) use the name Myoxidae because they argue that the name *Glis* does not fulfil the requirements of the Code. We continue to use the name Gliridae because the stability of zoological nomenclature is not enhanced by brushing up a name that has become obsolete since Ellerman's (1940) and Simpson's (1945) classification of the rodents. It is to be hoped that the question will be referred to the International Commission on Zoological Nomenclature'.

Additional references

Ellerman, J.R. 1940. *The families and genera of living rodents*, vol. 1. 689 pp. British Museum (Natural History), London.

Daams, R. & de Bruijn, H. 1995 (in press). A classification of the Gliridae (Rodentia) on the basis of dental morphology. *Hystrix*.

(15) Monique Vianey-Liaud
Institut des Sciences de L'Évolution, Laboratoire de Paléontologie, Université de Montpellier II (Sciences et Techniques du Languedoc), Case Courier 064, Place Eugène-Bataillon, F-34095 Montpellier Cedex 5, France

I wish to comment on the application to conserve some of Brisson's mammal names, and particularly on the conservation of the name *Glis*.

As a palaeontologist working on rodents, and especially on glirids, I want to underline that the use of the family name GLIRIDAE for dormice has been almost universal among specialists for more than 50 years. As a sign of this common use the names of numerous taxa are built around the generic name *Glis* (GLIRIDAE, GLIRINAE, GLIRAVINAE, *Gliravus*, *Miniglis*, *Tenuiglis*, *Bransatoglis*, *Pentaglis*, for example), whereas *Myoxus* has not been, and is not, used in the same way. I do not see any advantage in the rejection of *Glis* in favour of *Myoxus*; I see only problems with synonymies and confusion with the meaning of the names of taxa.

(16) J.J. Hooker
Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

I write regarding the application to conserve some of Brisson's (1762) mammal generic names.

I strongly support the conservation of the name *Glis* Brisson, 1762, as advocated by Anthea Gentry. *Glis* together with the family GLIRIDAE Thomas, 1897, of which it is the type genus, have long been in common and widespread use in the general literature. For instance, the *Zoological Record* lists nearly 90 papers (covering taxonomy, biology, physiology, ecology and conservation) over the past decade using the name *Glis* and only one using its junior objective synonym *Myoxus* Zimmermann, 1780. The latter (Wahlert, Sawitzke & Holden, 1993) is in fact the paper which advocates resurrection of the genus *Myoxus* and the family MYOXIDAE Gray, 1821. Moreover, use of the name GLIRIDAE is not restricted to the Recent members of the family, which are relatively few in number. Numerous systematic papers deal with a major diversity of glirid genera and species, which existed through much of the European Tertiary.

I feel that the case for stability is thus clear and presents no problems as to procedure; the Commission has already conserved *Odobenus* Brisson, 1762 (Opinion 467). A similar decision to conserve *Glis* Brisson, 1762 would be in the spirit of the Code as illustrated by a passage in the fourth of the key elements basic to the structure of the Code and zoological nomenclature (Code, Introduction, p. xiv): 'Nomenclatural rules are tools that are designed to provide the maximum stability compatible with taxonomic freedom. Accordingly they must also enable the Principle of Priority to be set aside in particular cases when the application of the Principle would be destructive of stability or universality, or would cause confusion'. The alternative, a rigid adherence to selected rules in order to upset such stability, such as resurrecting *Myoxus* Zimmermann, 1780, would not I believe be in the interests of effective scientific communication.

(17) Anthea Gentry
c/o The Secretariat, The International Commission on Zoological Nomenclature, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

I wish to correct a number of mistaken premises and factual errors that have appeared in comments published in BZN **51**: 342–348 (December 1994), in comments published above, and in recent papers by Holden (in Wilson & Reeder, 1993) and Wahlert, Sawitzke & Holden (1993).

Dr Gardner and Miss Holden (comments (4) and (10) above) refer to the Code and the criteria or rules employed in zoological nomenclature. However, the Code stresses the primacy of stability and universality of nomenclature over all other considerations and provisions, including priority. The ethos of stability is set out in the Introduction (p. xiv): 'The Code recognises that the rigid application of the Principle of Priority may, in certain cases, upset a long-accepted name in its accustomed meaning through the validation of a little-known, or even long-forgotten, name ... The Code contains provisions that enable the International Commission on Zoological Nomenclature to set aside, in such cases, the automatic operation of the Code whether that operation concerns the establishment of a name, the fixation of a name-bearing type, the spelling of a name, or any other matter'. Explicit provisions (for example, the Preamble (p. 3) and Articles 23b and 79) expound the need for stability and these have been cited in their comments above by Drs Hartenberger, de Bruijn and Hooker (nos. 13, 14 and 16). It follows that, although Brisson's (1762) work is not binominal with respect to specific names, under the Code junior synonyms should not have been introduced in recent compilations (Honacki, Kinman & Koeppl, 1982 and Wilson & Reeder, 1993) in place of those of Brisson's generic names currently in use. It would have been correct for these workers to have continued to use Brisson's names, whilst referring the problem to the Commission.

Wahlert, Sawitzke & Holden (1993) recorded that 'Gliridae is now the name applied most commonly to the family of dormice ... Preference for the name Gliridae arose with Simpson's (1945) classification of mammals'. Nevertheless, these authors and Holden (in Wilson & Reeder, 1993) introduced the names *Myoxus* and MYOXIDAE in place of *Glis* and GLIRIDAE. These authors reasoned that, since the name 'Gliridae' Muirhead, 1819 was not available (the group of genera on which it was based did not include *Glis*), then MYOXIDAE Gray, 1821 was the name to be used — and hence the generic name *Myoxus*. There is no provision in the Code for this method of selection of a generic name.

Wahlert et al. (1993) also argued: 'We disagree with Merriam (1895) that the uninomial generic key of Brisson (1762) validates the name *Glis*'. Brisson's names were given in the Latin nominative singular in both his 'Tabula synoptica Quadrupedum' and the 'Index Alphabeticus', as noted in para. 3 of the application. The genera were fully described in the 'Tabula'; names in this and in the 'Index' are cross-referenced to the names in his text and are therefore available under Article 11c(iii) of the Code (see also Article 12b(2)). Brisson's (1760) bird names were accepted by the Commission (Direction 105; October 1963) as available from his 'Tabula synoptica Avium'.

I can assure Miss Holden (cf. her comment above) that the name *Glis* has never been used validly for a taxon other than the edible dormouse. *Glis* Erxleben, 1777 is

a junior homonym of *Glis* Brisson, 1762 and cannot threaten the latter name. Furthermore, as noted in the application, Ellerman (1949) forestalled any possible confusion with Erxleben's name by rendering it a junior synonym of the name for the mole rat, *Spalax* Güldenstaedt, 1770. Reference to the synonymy of *Glis* Erxleben and *Spalax* has been omitted from Wilson & Reeder (1993).

Linnaeus consistently used the name *Sciurus glis* for the edible dormouse. The 1788 work mentioned by Holden as including the name *Myoxus* is attributable to Gmelin (not Linnaeus, who died in 1778). Gmelin probably adopted *Myoxus* (as did some other early authors) to avoid tautonomy.

The names *Glis* and GLIRIDAE Thomas, 1897 (p. 1016) were not introduced *de novo* by Simpson (1945) but were in common usage (see Lydekker, 1910, 1911; Miller, 1912). Wahlert et al. themselves (1993, p. 4) noted that 'After the middle of the 19th century the use of the four names [*Graphiurus*, *Eliomys*, *Glis* and *Muscardinus*] as genera became common practice'. Simpson (1945, p. 91, footnote) made it clear that the name MYOXIDAE had not been used for some time.

Holden (in Wilson & Reeder, 1993 and above) quoted Hopwood (1947), who considered Brisson's (1762) generic names to be unavailable, but not the several authors who have urged the conservation of Brisson's names. Hopwood was a mollusc specialist (in 1944 he was Chairman of the Nomenclature Committee of the Malacological Society of London; see Opinion 200, January 1954) and unfortunately had little experience in mammal taxonomy and nomenclature. The desirability of maintaining Brisson's generic names, citing those for birds, was noted in the first Code of zoological nomenclature (Strickland et al., 1843).

Dr Gardner states (no. 4 above) that, since Brisson (1762) is a partial reprinting of a pre-1758 publication, the names cannot be taken from it. A ruling about such works was made in 1907 (Opinion 5) but it was not included in the 1961 Code and therefore lapsed. Dr Gardner recommends rejecting *Tragulus* Brisson. However, an alternative course that results in *Moschiola* 'Hodgson, 1843' (the name for the Indian spotted chevrotain) becoming a junior objective synonym is not a viable one. As was noted in the application, Ellerman & Morrison-Scott (1951) considered that 'indicus' (included by Brisson in *Tragulus* and designated the type by Merriam, 1895) was of uncertain identity. In accord with the accepted usage of *Tragulus*, it was proposed that *Cervus javanicus* Osbeck, 1765 should be designated the type species under the Commission's plenary powers.

The rejection of Brisson's (1762) names by Honacki et al. (1982) has had little impact in the subsequent European literature. Wilson & Reeder's (1993) rejection of the names is not a reason for abandoning their usage (cf. Dr Wilson's comment on BZN **51**: 343–344); this is only one publication among hundreds of international, national, regional and local publications each year, not to mention popular works. The nomenclatural changes in the 1993 work have been adopted by some American workers but are by no means universally accepted. This is shown by the comments so far received on this case, including those by Drs Groves and Grubb (see BZN **51**: 342 and 346) who were contributing authors to the volume. It is, moreover, unrealistic to suppose that the nomenclature used by Wilson & Reeder will remain unchanged, both on taxonomic and nomenclatural grounds. In their review of that work, Corbet & Hill (1994) noted that it 'provides a sound basis for future refinement'; they criticised the rejection of Brisson's names. In a forthcoming publication, de Bruijn

& Daams (1995, in press) are maintaining the usage of *Glis* and GLIRIDAE (see Dr de Bruijn's comment above).

It was noted in the application, by Corbet & Hill (1994) and by Dr Corbet above (no. 12), that although Brisson's names were rejected in Honacki et al. (1982) and the second edition of the work (Wilson & Reeder, 1993), the consequential changes in other names have not been consistently followed. An application to conserve *Loris* E. Geoffroy Saint-Hilaire, 1796 as the name for the slender loris in favour of *Tardigradus* Boddaert, 1785 (which has been treated as a junior homonym of *Tardigradus* Brisson, 1762 and not used) was published in BZN **51**: 332–335 (December 1994). In rejecting Brisson's names, Drs Anderson (see BZN **51**: 346) and Eger (no. 8 above) have suggested that *Cuniculus* Meyer, 1790 should be suppressed in order to conserve *Oryctolagus* Lilljeborg, 1874 as the valid name for the European rabbit. The priority of *Cuniculus* Meyer over *Oryctolagus* was noted by Hopwood (1947), Ellerman & Morrison-Scott (1951), Corbet (1978) and Hoffman (in Wilson & Reeder, 1993), but no worker has yet submitted an application to conserve *Oryctolagus*. Rejection of Brisson's 11 names whose conservation I have proposed would mean a further five applications (known to me, but there may be others as yet unrecognised; see Dr Groves's comment on BZN **51**: 343) to conserve other names currently in use. In addition to the suppression of *Cuniculus* Meyer, 1790, Commission action would be required as follows:

1. To suppress *Cuniculus* Wagler, 1830 in order to conserve *Dicrostonyx* Gloger, 1841 as the name for the lemming (see BZN **51**: 139).

2. To set aside *Capra pygmea* Linnaeus, 1758 as the type species of *Tragulus* Pallas, 1767 and to designate *Cervus javanicus* Osbeck, 1765 as the type in order to conserve *Tragulus* for the chevrotains. *Tragulus* Boddaert, 1785 (a senior objective synonym of the bovid name *Neotragus* H. Smith, 1827) would become a junior homonym of Pallas's name (see BZN **51**: 140–141 and 342).

3. To suppress *Lagonobrax* Gloger, 1841 as an unused senior objective synonym of *Moschiola* 'Hodgson, 1843', following designation of *Moschus meminna* Erxleben, 1777 as the type species of *Lagonobrax* (see BZN **51**: 346). Thomas (1895) recorded that the great majority of Gloger's (1841) mammal generic names were synonyms of names in use.

4. To set aside *Agoutis* Cuvier as the type genus of AGOUTIDAE Gray, 1821 and to designate *Agouti* Lacépède, 1799 as the type, thereby rendering AGOUTIDAE available for the pacas and also conserving DASYPROCTIDAE Smith, 1842 for the agoutis (see BZN **51**: 347).

It is apparent that it would be more simple and more clear to conserve Brisson's 11 generic names by approving the current application.

Dr Gardner and Miss Holden (comments above) have remarked on the adaptability of taxonomic specialists to name changes. This ignores the needs of ecologists, conservationists, behaviourists, physiologists, and all those in applied fields, for stable nomenclature with as few name changes as possible. The older literature, and modern data bases, carry information under the previous names, and new names make archival research difficult and confusing. As an example I can cite a very recent paper on the distribution of the forest dormouse *Dryomus nitedula* by Krystufek & Vohralik (1994); the authors used MYOXIDAE in their title but cited 15 references dated from 1983 to 1993 with GLIRIDAE *in the titles* (one such includes both MYOXIDAE and

GLIRIDAE). This would lead those unaware of the nomenclatural situation to conclude that there are two distinct families.

No useful purpose has been served by upsetting the usage of Brisson's 11 names, in some cases by the introduction of names that have not been used in modern times. Unnecessary and undesirable confusion now exists in the usage of generic names for the edible dormouse and the paca, and is only avoided in the name for the chevrotain by using a name in the wrong sense (i.e. *Tragulus* Pallas, which relates to a bovid). It seems beneficial and constructive to conserve those names which are established.

Additional references

Corbet, G.B. & Hill, J.E. 1994. Wilson, D.E. and D.M. Reeder (eds.). 1993. *Mammal species of the world; a taxonomic and geographic reference*, 2nd Edition. The view from the Old World. *Journal of Mammalogy*, **75**(1): 239–243.

Krystufek, B. & Vohralik, V. 1994. Distribution of the forest dormouse *Dryomys nitedula* (Pallas, 1779) (Rodentia, Myoxidae) in Europe. *Mammal Review*, **24**(4): 161–177.

Lydekker, R. 1910. Dormouse. Pp. 429–430 *in*: *The Encyclopaedia Britannica*, Ed. 11, vol. 8. xiv, 1000 pp. University Press, Cambridge.

Lydekker, R. 1911. Rodentia. Pp. 437–447 *in*: *The Encyclopaedia Britannica*, Ed. 11, vol. 23. xiii, 1024 pp. University Press, Cambridge.

H.E. Strickland (and 11 others). 1843. Report of a Committee appointed 'to consider of the rules by which the Nomenclature of Zoology may be established on a uniform and permanent basis'. *Reports of the British Association for the Advancement of Science*, **1843**: 105–121. (Report of the 12th meeting held at Manchester in June 1842).

Thomas, O. 1895. An analysis of the mammalian generic names given in Dr C.W.L. Gloger's 'Naturgeschichte' (1841). *The Annals and Magazine of Natural History*, (6)**15**: 189–193.

Thomas, O. 1897. On the genera of rodents: an attempt to bring up to date the current arrangement of the order. *Proceedings of the Zoological Society of London*, **1896**: 1012–1028.

OPINION 1792

Pleurotoma meneghinii Mayer, 1868 (currently *Asthenotoma meneghinii*; Mollusca, Gastropoda): neotype replaced by rediscovered lectotype

Ruling

(1) All previous fixations of type specimens for the nominal species *Pleurotoma meneghinii* Mayer, 1868 are hereby set aside and specimen no. H 17365 in the Mayer-Eymar collection in the Naturhistorisches Museum, Basel, figured by Mayer (1868, pl. 3, fig. 3) and by Gatto (1993, pl. 1, figs. 1a, 1b), is designated as the lectotype.

(2) The name *Asthenotoma* Harris & Burrows, 1891 (gender: feminine), type species by monotypy of the replaced nominal genus *Oligotoma* Bellardi, 1875, *Pleurotoma meneghinii* Mayer, 1868, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *meneghinii* Mayer, 1868, as published in the binomen *Pleurotoma meneghinii* (specific name of the type species of *Asthenotoma* Harris & Burrows, 1891) and as defined by the lectoype designated in (1) above, is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2860

An application to replace the neotype for *Pleurotoma meneghinii* Mayer, 1868, designated by Gatto (1990), by a putative lectotype from Mayer's rediscovered original type series was received from Dr Roberto Gatto (*Dipartimento di Geologia, Paleontologia e Geofisica dell'Università, Padova, Italy*) on 10 November 1992. After correspondence the case was published in BZN **50**: 209–211 (September 1993). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that, in the absence of the type material of *Pleurotoma meneghinii* Mayer, 1868, which was presumed to have been lost (para. 3 of the application), Gatto (1990) validly designated a neotype. On rediscovering Mayer's original material, Gatto (1993) proposed that the neotype should be replaced by a lectotype, which he described and figured. The lectotype designation (Gatto, 1993, p. 484) was stated to be 'conditional upon approval by the International Commission on Zoological Nomenclature'. The application (para. 6(1) on BZN **50**: 210) sought to set aside the 1990 neotype and to 'confirm the lectotype designation by Gatto (1993)'.

Commission action was required (Article 75h of the Code) for the lectotype to be recognised as the name-bearing type. However, it might have been considered that a formal lectotype designation had not been made. To remove all doubt proposals (1) and (3) on BZN **50**: 210, para. 6, were amended on the voting paper to request that the designation be made by the Commission.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on proposal (2) published in BZN **50**: 210, and amended proposals (1) and (3). At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Asthenotoma Harris & Burrows, 1891, *The Eocene and Oligocene beds of the Paris Basin*, p. 113.

meneghinii, *Pleurotoma*, Mayer, 1868, *Journal de Conchyliologie*, **16**: 109.

OPINION 1793

Chtenopteryx Appellöf, 1890 (Mollusca, Cephalopoda): confirmed as the correct original spelling

Ruling

(1) It is hereby confirmed that the name *Chtenopteryx* Appellöf, 1890 is correctly so spelled.

(2) The name *Chtenopteryx* Appellöf, 1890 (gender: feminine), type species by monotypy *Chtenopteryx fimbriatus* Appellöf, 1890 (a junior subjective synonym of *Sepioteuthis sicula* Verany, 1851), is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *sicula* Verany, 1851, as published in the binomen *Sepioteuthis sicula* (a senior subjective synonym of *Chtenopteryx fimbriatus* Appellöf, 1890, the type species of *Chtenopteryx* Appellöf, 1890), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name CHTENOPTERYGIDAE Grimpe, 1922 (type genus *Chtenopteryx* Appellöf, 1890) is hereby placed on the Official List of Family-Group Names in Zoology (corrected original spelling).

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Ctenopteryx* Joubin, 1900 (an incorrect subsequent spelling of *Chtenopteryx* Appellöf, 1890);

(b) *Ctenopteryx* Pfeffer, 1900 (an unjustified emendation of *Chtenopteryx* Appellöf, 1890 and a junior homonym of *Ctenopteryx* Flach, 1889).

(6) The name CTENOPTERYGIDAE Grimpe, 1922 is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (an incorrect original spelling of CHTENOPTERYGIDAE Grimpe, 1922).

History of Case 2874

An application to confirm as correct the original spelling of *Chtenopteryx* Appellöf, 1890 was received from Drs Giambattista Bello (*Istituto Arion, Mola di Bari, Italy*) and Riccardo Giannuzzi-Savelli (*Palermo, Italy*) on 27 January 1993. After correspondence the case was published in BZN **50**: 270–272 (December 1993). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 271–272. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Holthuis, Kabata, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 1: Heppell.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Heppell commented that in his view it was unnecessary to have brought the application to the Commission's attention.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

CHTENOPTERYGIDAE Grimpe, 1922, *Sitzungsberichte der naturforschenden Gesellschaft zu Leipzig*, **45–48 (1918–1921)**: 45 (incorrectly spelled as CTENOPTERYGIDAE).

Chtenopteryx Apellöf, 1890, *Bergens Museums Aarsberetning*, **1889**(33): 3.

CTENOPTERYGIDAE Grimpe, 1922, *Sitzungsberichte der naturforschenden Gesellschaft zu Leipzig*, **45–48 (1918–1921)**: 45 (an incorrect original spelling of CHTENOPTERYGIDAE).

Ctenopteryx Joubin, 1900, *Résultats des Campagnes Scientifiques accomplies sur son yacht par Albert Ier Prince Souverain de Monaco*, **17**: 9.

Ctenopteryx Pfeffer, 1900, *Mitteilungen aus dem Naturhistorischen Museum in Hamburg*, **17**: 171.

sicula, *Sepioteuthis* Verany, 1851, *Mollusques Méditeranéens*, part 1 (Céphalopodes de la Méditerranée), p. 75.

OPINION 1794

Sigara coleoptrata Fabricius, [1777] (Insecta, Heteroptera): specific name conserved, and *Notonecta obliqua* Thunberg, 1787: specific name placed on the Official List

Ruling

(1) Under the plenary powers the specific name *marginata* Müller, 1776, as published in the binomen *Notonecta marginata*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *coleoptrata* Fabricius, [1777], as published in the binomen *Sigara coleoptrata*;

(b) *obliqua* Thunberg, 1787, as published in the binomen *Notonecta obliqua*.

(3) The name *marginata* Müller, 1776, as published in the binomen *Notonecta marginata* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2829

An application for the conservation of the specific name of *Notonecta obliqua* Thunberg, 1787 by the suppression of the putative senior subjective synonym *N. marginata* Müller, 1776 was received from Drs Antti Jansson (*Zoological Museum, University of Helsinki, Finland*) and John T. Polhemus (*University of Colorado Museum, Englewood, Colorado, U.S.A.*) on 28 August 1991. After correspondence the case was published in BZN **50**: 118–120 (June 1993). Notice of the case was sent to appropriate journals.

A comment from Dr I.M. Kerzhner (*Academy of Sciences, St Petersburg, Russia*), published in BZN **51**: 41–42 (March 1994), supported the placement on the Official List of the specific name of the notonectid *Notonecta obliqua*, but identified the supposed senior synonym *N. marginata* Müller, 1776 as a synonym of the corixid *Sigara coleoptrata* Fabricius, [1777]. A reply by the authors of the application, published at the same time, accepted the revised synonymy and proposed (BZN **51**: 43) that Fabricius's name should be conserved and placed on the Official List. This additional proposal was included on the voting paper.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 119 and **51**: 43. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 21: Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Lehtinen, Mahnert, Martins de Souza, Minelli (part), Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 2: Cogger, Macpherson.

No votes were received from Bayer, Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Cogger commented that he would have voted for the application if it had included the designation of a neotype for *Notonecta obliqua*. Heppell commented: 'Vol. 2 of

the original Swansea edition of Turton's translation of Gmelin's (1790) work is dated 1800, and is thus two years earlier than the more common London edition cited by the applicants (para. 3). This is purely bibliographical and does not affect the nomenclatural issue'. Minelli commented: 'I support proposals (1) and (3) of the original application, as well as the amendment concerning *Sigara coleoptrata*, but I reject proposal (2), to place on the Official List the specific name of *Notonecta obliqua*, because the case does not actually involve this nominal species'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

coleoptrata, *Sigara*, Fabricius, [1777], *Genera insectorum* ..., p. 298.

marginata, *Notonecta*, Müller, 1776, *Zoologiae Danicae prodromus, seu animalium Daniae et Norvegiae indigenarum characteres, nomina, et synonyma imprimis popularium*, p. 104.

obliqua, *Notonecta*, Thunberg, 1787, *Donation Thunbergianae 1785*, continuat. III. *Museum Naturalium Academiae Upsaliensis*, p. 61, footnote.

The following is the reference for the designation of the lectotype of *Sigara coleoptrata* Fabricius, [1777]:

Jansson, A. 1986. *Acta Entomologica Fennica*, **47**: 21.

OPINION 1795

Corisa sexlineata Reuter, 1882 (currently *Sigara* (*Tropocorixa*) *sexlineata*; Insecta, Heteroptera): specific name not conserved, and that of *C. confluens* Fieber, 1851 placed on Official List

Ruling

(1) The name *confluens* Fieber, 1851, as published in the binomen *Corisa confluens*, is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2831

An application to conserve the specific name of *Corisa sexlineata* Reuter, 1882 by the suppression of the senior subjective synonym *C. confluens* Fieber, 1851 was received from Dr Antti Jansson (*Zoological Museum, University of Helsinki, Finland*) on 29 August 1991. After correspondence the case was published in BZN **50**: 124–126 (June 1993). Notice of the case was sent to appropriate journals.

The application was submitted for voting on 1 March 1994. The case received a majority (17 votes in favour, 9 against) but failed by one vote to reach the necessary two-thirds majority for the conservation of the junior name. Voting against, Dupuis commented on his voting paper that the labels used in the Puton and Marmottan collections in the Muséum National d'Histoire Naturelle, Paris (para. 2 of the application) demonstrated the use of Fieber's name *confluens* in the 19th century. The name had been listed in Oshanin (1910) and Stichel (1955), which were classic works. It was not clear that 'considerable confusion' would result from the retention of Fieber's name (there were not many specialists and no comments had been received). Holthuis commented: 'Evidently this is not a widely known species and only familiar to taxonomists. I do not see that this case is important enough for the use of the plenary powers by the Commission; for such minor name changes it is better to apply the Code strictly'. Kabata commented: 'The Principle of Priority is a linchpin of the Code which must not be overridden unless there is clear evidence that this is necessary for stability. The cited frequency of use (16 times during the last 45 years) of the junior synonym is hardly overwhelming; much more frequently-used names have been changed without causing a ripple in the world of systematics'. Štys commented: 'I fail to see why the provisions of the Code should not be applied and priority observed. *Sigara sexlineata* is by no means widely known or otherwise especially important and the name *Corisa confluens* was used by Jordan (1953) and by Stichel (1955)'. [*Editorial note*. Stichel also listed *S. sexlineata*; para. 4 of the application].

On 1 September 1994 the application was sent to the Commission for a revote under the Bylaws. It was noted on the voting paper that the references cited and those held by the Secretariat (para. 3 of the application) showed that the taxon had a wide distribution (the Near and Middle East and the whole of Africa) and that in the primary literature of the past half century only the junior name *sexlineata* had been adopted.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to revote on the proposals published in BZN **50**: 125. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 7: Bock, Hahn, Nielsen, Nye, Schuster, Štys, Willink

Negative votes — 17: Bayer, Bouchet, Cocks, Cogger, Corliss, Heppell, Holthuis, Kabata, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Savage, Starobogatov, Thompson and Trjapitzin.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Cogger commented that he would have voted for the application if it had included a neotype designation for *Corisa sexlineata* Reuter, 1882. Mahnert commented: 'In my view application of the principle of priority in this case does not cause confusion; taxonomists are confronted with regular nomenclatural changes, particularly in taxa without considerable economic, medical or ecological importance'.

The required majority for the conservation of the specific name of *Corisa sexlineata* Reuter, 1882 was not reached and its use for the taxon has therefore not been accepted. It has the status of a junior subjective synonym of *C. confluens* Fieber, 1851.

Original references

The following is the original reference to the name placed on an Official List by the ruling given in the present Opinion:

confluens, *Corisa*, Fieber, 1851, *Species generis* Corisa, p. 18. (A preprint from *Abhandlungen der Königlichen Böhmischen Gesellschaft der Wissenschaften*, (5)7: 230; 1852).

OPINION 1796

Platynectes Régimbart, 1879 (Insecta, Coleoptera): conserved

Ruling

(1) Under the plenary powers the name *Plateocolymbus* Gistel, 1857 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Platynectes* Régimbart, 1879 (gender: masculine), type species by subsequent designation by Guignot (1946) *Agabus decemnotatus* Aubé, 1838, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *decemnotatus* Aubé, 1838, as published in the binomen *Agabus decemnotatus* (specific name of the type species of *Platynectes* Régimbart, 1879), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Plateocolymbus* Gistel, 1857, as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

History of Case 2841

An application for the conservation of the generic name *Platynectes* Régimbart, 1879 was received from Dr Anders N. Nilsson (*University of Umeå, Umeå, Sweden*) on 23 January 1992. After correspondence the case was published in BZN **50**: 212–214 (September 1993). Notice of the case was sent to appropriate journals.

Support for the application was received from Dr Hans Silfverberg (*Universitetets Zoologiska Museum, Helsinki, Finland*).

It was noted on the voting paper that paras. 1 and 2 of the application and cited references (para. 4) indicated a wide distribution for *Platynectes* species. Dr Nilsson had noted (in litt., January and February, 1992) that no author who had seen material of *P. kashmiranus* had raised any doubts that it correctly belonged in *Platynectes*.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 213. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 17: Bayer, Bock, Cocks, Cogger, Corliss, Hahn, Heppell, Macpherson, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin, Willink

Negative votes — 7: Bouchet, Holthuis, Kabata, Lehtinen, Mahnert, Martins de Souza and Thompson.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Bouchet commented: '*Platynectes* is clearly not a name frequently used, even in the taxonomic literature. I see no convincing reason to depart from priority. Colleagues in entomology tell me that in 1967 another 'forgotten' Gistel name was reinstated without causing chaos. I am convinced that the few taxonomists working in Dystiscidae would adjust rapidly to using *Plateocolymbus*'. Holthuis commented: '*Colymbetes lineatus* Redtenbacher, 1844 (= *Platynectes kashmiranus* Balfour-Browne, 1944) is a species incerta. Consequently the synonymy of *Platynectes*

Régimbart, 1879 with *Plateocolymbus* Gistel, 1857 is uncertain and it therefore seems unjustified to suppress the older name. In my view the only course that the Commission could follow would be to give *Plactynectes* precedence over *Plateocolymbus* without suppressing the latter'. Mahnert commented: 'Nine papers in the last 23 years treating this genus do not indicate a serious reason why a change of name would cause undue confusion and create instability. Priority should be respected in this case'.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

decemnotatus, *Agabus*, Aubé, 1838, *Species général des Hydrocanthares et Gyriniens, par le docteur Ch. Aubé; pour faire suite au species général des Coléoptères de la collection de M. le Comte Dejean*, vol. 6, p. 319.

Platynectes Régimbart, 1879, *Annales de la Société Entomologique de France*, (5)**8**: 462.

Plateocolymbus Gistel, 1857, *Vacuna oder die Geheimnisse aus der organischen und leblosen Welt*, vol. 2, p. 606.

The following is the reference for the designation of *Agabus decemnotatus* Aubé, 1838 as the type species of the nominal genus *Platynectes* Régimbart, 1879:

Guignot, F. 1946. *Revue Française d'Entomologie*, **13**: 117.

OPINION 1797

Oecothea Haliday in Curtis, 1837 (Insecta, Diptera): conserved, and *Helomyza fenestralis* Fallén, 1820 designated as the type species

Ruling

(1) Under the plenary powers:

(a) it is hereby ruled that the name *Oecothea* is deemed to have been made available in Curtis (1837);

(b) it is hereby ruled that the authorship of *Oecothea* is deemed to be Haliday in Curtis;

(c) all previous fixations of type species for the nominal genus *Oecothea* Haliday in Curtis, 1837 are hereby set aside prior to the qualified designation by Gorodkov (1984) of *Helomyza fenestralis* Fallén, 1820 and that designation is ruled to be valid.

(2) The name *Oecothea* Haliday in Curtis, 1837 (gender: feminine), type species by subsequent designation by Gorodkov (1984) *Helomyza fenestralis* Fallén, 1820 as ruled in (1)(c) above, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *fenestralis* Fallén, 1820, as published in the binomen *Helomyza fenestralis* (specific name of the type species of *Oecothea* Haliday in Curtis, 1837), is hereby placed on the Official List of Specific Names in Zoology.

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Aecothea* Haliday, 1838 (a junior objective synonym of *Oecothea* Haliday in Curtis, 1837);

(b) *Neoecothea* Peterson & Gill, 1982 (a junior objective synonym of *Oecothea* Haliday in Curtis, 1837).

History of Case 2836

An application for the conservation of the generic name *Oecothea* Haliday in Curtis, 1837, and the designation of *Helomyza fenestralis* Fallén, 1820 as the type species, was received from Drs Andrzej Woźnica and Tadeusz Zatwarnicki (*Agricultural University, Wroclaw, Poland*) on 26 November 1991. After correspondence the case was published in BZN **50**: 44–47 (March 1993). Notice of the case was sent to appropriate journals.

Comments in support received from Drs Neal L. Evenhuis, Wayne N. Mathis & F. Christian Thompson and from Dr Curtis W. Sabrosky were published in BZN **50**: 235–236 (September 1993) and **50**: 286 (December 1993) respectively.

It was noted on the voting paper that Evenhuis et al. considered the name *Oecothea* Haliday to be available from Curtis (1837) as a junior synonym of *Suillia* Robineau-Desvoidy, 1830 (Article 11e of the Code). As noted in the application, there had been considerable doubt whether the name was available from this work. To settle the matter the Commission was asked (para. 7(1)(a) and (b) on BZN **50**: 45) to rule that *Oecothea* Haliday was available from Curtis (1837).

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 45–46. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Aecothea Haliday, 1838, *Annals of Natural History*, **2**: 187.

fenestralis, *Helomyza*, Fallén, 1820, *Heteromyzides Sveciae*, p. 5.

Neoecothea Peterson & Gill, 1982, *Memoirs of the Entomological Society of Washington*, **10**: 219.

Oecothea Haliday in Curtis, 1837, *A guide to an arrangement of British insects; being a catalogue of all the named species hitherto discovered in Great Britain and Ireland*, Ed. 2, col. 280.

The following is the reference for the designation of *Helomyza fenestralis* Fallén, 1820 as the type species of the nominal genus *Oecothea* Haliday in Curtis, 1837:

Gorodkov, K.B. 1984. *In* Soós, A. & Papp, L. (Eds.), *Catalogue of Palaearctic Diptera*, vol. 10, p. 18.

OPINION 1798

Rivulus marmoratus Poey, 1880 (Osteichthyes, Cyprinodontiformes): given precedence over *R. ocellatus* Hensel, 1868, and a neotype designated for *R. marmoratus*

Ruling

(1) Under the plenary powers:

(a) all previous fixations of type specimen for the nominal species *Rivulus marmoratus* Poey, 1880 are hereby set aside and specimen no. 37429 in the United States National Museum, Washington, D.C., is designated as the neotype;

(b) the specific name *marmoratus* Poey, 1880, as published in the binomen *Rivulus marmoratus*, is hereby given precedence over the specific name *ocellatus* Hensel, 1868, as published in the binomen *Rivulus ocellatus*, whenever the two names are considered to be synonyms.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *marmoratus* Poey, 1880, as published in the binomen *Rivulus marmoratus* and as defined by the neotype designated in (1)(a) above, with the endorsement that it is to be given precedence over *ocellatus* Hensel, 1868, as published in the binomen *Rivulus ocellatus*, whenever the two names are considered to be synonyms;

(b) *ocellatus* Hensel, 1868, as published in the binomen *Rivulus ocellatus*, with the endorsement that it is not to be given priority over *marmoratus* Poey, 1880, as published in the binomen *Rivulus marmoratus*, whenever the two names are considered to be synonyms.

History of Case 2722

An application to conserve the specific name of *Rivulus marmoratus* Poey, 1880 by the suppression of the senior name *R. ocellatus* Hensel, 1868 was received from Drs Kenneth J. Lazara (*United States Merchant Marine Academy, Kings Point, N.Y., U.S.A.*) and Michael L. Smith (*American Museum of Natural History, New York, N.Y., U.S.A.*) on 3 May 1989. After correspondence the case was published in BZN **47**: 191–194 (September 1990). Notice of the case was sent to appropriate journals.

A comment by Dr Lothar Seegers (c/o *Zoologisches Forschungsinstitut und Museum A. Koenig, Bonn, Germany*), published in BZN **48**: 150–151 (June 1991), agreed with the synonymy of *marmoratus* and *ocellatus* but opposed the use of the junior name. A reply by the authors of the application was published at the same time.

The original application was sent to the Commission for voting on 1 December 1991 and received the necessary two-thirds majority for approval (20 votes in favour, 8 against and 1 abstention). A number of Commissioners voting against the proposals commented on their voting papers. Hahn commented: 'Specialists do not agree on the suppression of *Rivulus ocellatus*, as the comments have shown. Therefore it would be better to give precedence to *R. marmoratus* over *R. ocellatus* if the two are interpreted as synonyms, rather than to suppress *ocellatus*'. Lehtinen commented:

'The existence of type material is essential in taxonomic work. In making the choice between a name defined by type material and a name without, arguments in favour of the latter alternative must be really strong'. Martins de Souza commented: 'According to my colleagues of the ichthyological section in this [the University of São Paulo] Museum, the taxonomy of this genus is confused and is currently being revised by Dr W.J.E.M. Costa. They do not believe that *R. marmoratus* and *R. ocellatus* are conspecific; Costa (1990) considered them as separate species and the suppression of *ocellatus* would cause much confusion'. Nye commented: 'The senior synonym has had usage as the valid name within the past eight, let alone 50, years'. Ride commented: 'Lazara & Smith should designate a neotype for *R. marmoratus* despite their assertion (BZN **48**: 151–152) that the species can be identified from the description. As long as there is no known type the name will not be fully stable'. Dupuis abstained on the grounds that the case involved taxonomic rather than nomenclatural issues.

A comment from Dr Wilson J.E.M. Costa (*Universidade Federal do Rio de Janeiro, Cidade Universitária, Rio de Janeiro, Brazil*), published in BZN **51**: 46–47 (March 1994), noted that the taxonomic status of the nominal species (including *ocellatus*, *marmoratus*, *bonairensis* Hoedeman, 1958 and *caudomarginatus* Seegers, 1984) which comprise the species-complex was still uncertain, and that it would be premature to suppress the name *ocellatus*.

In response to the comments by Commissioners and by Dr Costa, Drs Lazara & Smith (BZN **51**: 47–48) revised their original proposals so as to request that *marmoratus* be given precedence over *ocellatus* if the names are synonymized, rather than that the latter name be suppressed, and proposed the designation of a neotype (specimen USNM 37429) for *marmoratus*.

On 1 September 1994 the revised proposals, published on BZN **51**: 48, were offered for voting. It was noted on the voting paper that on their approval by the Commission *marmoratus* becomes the valid name for the species if this is not taxonomically divided; if differentiated, *ocellatus* remains available for use as a specific or subspecific name. Treated as subspecies, *ocellatus*, *bonairensis* and *caudomarginatus* become *R. marmoratus ocellatus*, *R. m. bonairensis* and *R. m. caudomarginatus*.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the revised proposals published in BZN **51**: 48. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Bouchet (part), Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Schuster, Starobogatov, Thompson, Trjapitzin, Willink

Negative votes — 3: Kabata, Savage and Štys.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Bouchet voted in favour of the neotype designation for *Rivulus marmoratus* but against giving *marmoratus* precedence over *ocellatus*. Štys commented: 'This is a case involving a group with unsettled taxonomy. In my view a change in precedence of the specific and subspecific names would be more confusing for ichthyologists than a simple adherence to the principle of priority'.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

marmoratus, *Rivulus*, Poey, 1880, *Anales de la Sociedad Española de Historia Natural*, **9**(2): 248.

ocellatus, *Rivulus*, Hensel, 1868, *Archiv für Naturgeschichte Wiegman*, **34**(1): 365.

OPINION 1799

Naucrates Rafinesque, 1810 and *Xyrichtys* Cuvier, 1814 (Osteichthyes, Perciformes): conserved

Ruling

(1) Under the plenary powers the following generic names are hereby suppressed:

(a) *Hemipteronotus* Lacépède, 1801 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(b) *Centronotus* Lacépède, 1801, and all uses of the name *Centronotus* prior to the publication of *Centronotus* Bloch & Schneider, 1801, for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Naucrates* Rafinesque, 1810 (gender: masculine), type species by subsequent designation by Jordan & Gilbert (1883) *Gasterosteus ductor* Linnaeus, 1758;

(b) *Xyrichtys* Cuvier, 1814 (gender: masculine), type species by subsequent designation by Jordan & Gilbert (1883) *Coryphaena novacula* Linnaeus, 1758.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *ductor* Linnaeus, 1758, as published in the binomen *Gasterosteus ductor* (specific name of the type species of *Naucrates* Rafinesque, 1810);

(b) *novacula* Linnaeus, 1758, as published in the binomen *Coryphaena novacula* (specific name of the type species of *Xyrichtys* Cuvier, 1814).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Hemipteronotus* Lacépède, 1801, as suppressed in (1)(a) above;

(b) *Centronotus* Lacépède, 1801, as suppressed in (1)(b) above.

History of Case 2842

An application for the conservation of the generic names *Naucrates* Rafinesque, 1810 and *Xyrichtys* Cuvier, 1814 was received from Drs John E. Randall (*Bishop Museum, Honolulu, Hawaii, U.S.A.*) and M.L. Bauchot (*Muséum National d'Histoire Naturelle, Paris, France*) on 2 February 1992. After correspondence the case was published in BZN **50**: 277–281 (December 1993). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that both the generic names *Naucrates* Rafinesque, 1810 (type species *Gasterosteus ductor* Linnaeus, 1758) for the pilotfish, and *Xyrichtys* Cuvier, 1814 (type species *Coryphaena novacula* Linnaeus, 1758) for the razorfishes, were threatened by the senior subjective synonym *Hemipteronotus* Lacépède, 1801. *H. quinquemaculatus* Lacépède, 1801, the type species of *Hemipteronotus*, related by description to the pilotfish and by reference to both this and to the razorfish *Coryphaena pentadactyla* Linnaeus, 1758. Linnaeus's nominal species *C. pentadactyla* was itself composite, including references to both the pilotfish and the razorfish, until restricted by Gmelin ([1789]) and subsequent authors to the razorfish (currently known as *Xyrichtys pentadactyla*). Suppression of *Hemipteronotus* was proposed.

Xyrichtys Cuvier, 1814 was based on three species of razorfish (*pentadactyla* and *novacula* of Linnaeus, 1758, and *coerulea* Bloch, 1786), all of which were originally included with the dolphins in *Coryphaena* Linnaeus, 1758.

Naucrates Rafinesque, 1810 had been universally adopted for the pilotfish whilst the senior synonym *Centronotus* Lacépède, 1801 had remained unused. Until recently vol. 3 of Lacépède's *Histoire naturelle des poissons*, in which a number of new names first appeared, had been thought to date from 1802 and *Centronotus* Lacépède had been treated as a junior homonym of *Centronotus* Bloch & Schneider, 1801. Jordan's (1917) statement that *Centronotus* Lacépède was replaced by *Naucrates* had been made on this basis. Roux (1973), however, demonstrated that Lacépède's work dates from October 1801; in the absence of an exact date for the publication of Bloch & Schneider's work it is deemed to have appeared in December 1801. Suppression of *Centronotus* Lacépède was proposed.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 279–280. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Kabata, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 1: Holthuis.

Schuster abstained.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Centronotus Lacépède, 1801, *Histoire naturelle des poissons*, vol. 3, p. 309.

ductor, *Gasterosteus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 295.

Hemipteronotus Lacépède, 1801, *Histoire naturelle des poissons*, vol. 3, p. 214.

Naucrates Rafinesque, 1810, *Caratteri di alcuni nuovi generi e nuove specie di animali e piante della Sicilia* ..., p. 43.

novacula, *Coryphaena*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 262.

Xyrichtys Cuvier, 1814, *Bulletin des Sciences, par la Société Philomatique de Paris*, **1814**: 87.

The following is the reference for the designation of *Gasterosteus ductor* Linnaeus, 1758 as the type species of the nominal genus *Naucrates* Rafinesque, 1810, and *Coryphaena novacula* Linnaeus, 1758 as the type species of the nominal genus *Xyrichtys* Cuvier, 1814:

Jordan, D.S. & Gilbert, C.H. 1883. *Bulletin of the United States National Museum*, **16**: 443, 605 (respectively).

OPINION 1800

Emys Duméril, 1806 (Reptilia, Testudines): conserved

Ruling

(1) Under the plenary powers the name *Emydes* Brongniart, [1805] is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Emys* Duméril, 1806 (gender: feminine), type species by subsequent designation by Lindholm (1929) *Testudo lutaria* Linnaeus, 1758 (a junior subjective synonym of *Testudo orbicularis* Linnaeus, 1758), is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *orbicularis* Linnaeus, 1758, as published in the binomen *Testudo orbicularis* (senior subjective synonym of the specific name of *Testudo lutaria* Linnaeus, 1758, the type species of *Emys* Duméril, 1806, by the first reviser action of Mertens & Wermuth, 1960), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Emydes* Brongniart, [1805], as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

History of Case 2873

An application for the conservation of the generic name *Emys* Duméril, 1806 by the suppression of the unused senior subjective synonym *Emydes* Brongniart, [1805] was received from Dr Robert G. Webb (*University of Texas at El Paso, El Paso, Texas, U.S.A.*) on 22 December 1992. After correspondence the case was published in BZN **50**: 224–227 (September 1993). Notice of the case was sent to appropriate journals.

A comment in support from Prof Hobart M. Smith (*University of Colorado, Boulder, Colorado, U.S.A.*) was published in BZN **51**: 52 (March 1994).

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 226. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — none.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Emydes Brongniart, [1805], *Essai d'une classification naturelle des reptiles* ..., p. 27.

Emys Duméril, 1806, *Zoologie analytique ou méthode naturelle de classification des animaux* ..., p. 76.
orbicularis, *Testudo*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 198.

The following is the reference for the designation of *Testudo lutaria* Linnaeus, 1758 as the type species of the nominal genus *Emys* Duméril, 1806:
Lindholm, W.A. 1929. *Zoologischer Anzeiger*, **81**: 282, footnote.

The following is the reference for the first reviser selection of the precedence of *Testudo orbicularis* over *T. lutaria*, both of Linnaeus (1758):
Mertens, R. & Wermuth, H. 1960. *Die Amphibien und Reptilien Europas*, p. 12.

OPINION 1801

Cetiosauriscus Huene, 1927 (Reptilia, Sauropodomorpha): *Cetiosauriscus stewarti* Charig, 1980 designated as the type species

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Cetiosauriscus* Huene, 1927 are hereby set aside and *Cetiosauriscus stewarti* Charig, 1980 is designated as the type species.

(2) The name *Cetiosauriscus* Huene, 1927 (gender: masculine), type species by designation under the plenary powers in (1) above *Cetiosauriscus stewarti* Charig, 1980, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *stewarti* Charig, 1980, as published in the binomen *Cetiosauriscus stewarti* (specific name of the type species of *Cetiosauriscus* Huene, 1927), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2876

An application for the designation of *Cetiosauriscus stewarti* Charig, 1980 as the type species of *Cetiosauriscus* Huene, 1927 was received from Dr A.J. Charig (*The Natural History Museum, London, U.K.*) on 1 February 1993. After correspondence the case was published in BZN **50**: 282–283 (December 1993). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 283. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Heppell, Holthuis, Kabata, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Thompson, Trjapitzin, Willink

Negative votes — 1: Štys.

No votes were received from Halvorsen, Lehtinen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Štys commented: 'This is clearly a case where the Commission is asked to settle a taxonomic problem (resulting from the incompleteness of two critical fossil specimens) by nomenclatural action'.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Cetiosauriscus Huene, 1927, *Eclogae Geologicae Helvetiae*, **20**(3): 453.

stewarti, *Cetiosauriscus*, Charig, 1980, *in* Jacobs, L.L. (Ed.), *Aspects of vertebrate history: essays in honor of Edwin Harris Colbert*, p. 242.

OPINION 1802

Dinodontosaurus Romer, 1943 (Reptilia, Synapsida): conserved

Ruling

(1) Under the plenary powers the name *Diodontosaurus* Caldas, 1936 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Dinodontosaurus* Romer, 1943 (gender: masculine), type species by monotypy *Dinodontosaurus oliveirai* Romer, 1943 (a junior subjective synonym of *Dicynodon turpior* Huene, 1935), is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *turpior* Huene, 1935, as published in the binomen *Dicynodon turpior* (senior subjective synonym of the specific name of *Dinodontosaurus oliveirai* Romer, 1943, the type species of *Dinodontosaurus* Romer, 1943), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Diodontosaurus* Caldas, 1936, as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

History of Case 2807

An application for the conservation of the generic name *Dinodontosaurus* Romer, 1943 by the suppression of the unused senior subjective synonym *Diodontosaurus* Caldas, 1936 was received from Dr Spencer G. Lucas (*New Mexico Museum of Natural History, Albuquerque, New Mexico, U.S.A.*) on 30 January 1991. After correspondence the case was published in BZN **49**: 52–54 (March 1992). Notice of the case was sent to appropriate journals.

The application was sent to the Commission for voting on 1 March 1993. The proposals gained a majority of votes (14 votes in favour, 11 against) but not the two-thirds majority required for the suppression of *Diodontosaurus*. On 1 September 1994 the application was submitted for a revote under the Bylaws.

A comment in support of the application from Dr S. Bandyopadhyay (*Geological Studies Unit, Calcutta, India*) was published in BZN **49**: 291 (December 1992). Further comments in support from Drs A.R.I. Cruickshank (*University of Leicester, Leicester, U.K.*), Laurie R. Walter (*Chicago State University, Chicago, Illinois, U.S.A.*) and Alan J. Charig (*The Natural History Museum, London, U.K.*) were published in BZN **50**: 290 (December 1993).

It was noted on the voting paper that, voting in March 1993 against the application, Dupuis commented that the similarity of the names *Diodontosaurus* and *Dinodontosaurus* was perhaps not fortuitous and that, with an illustration and a type specimen, Caldas's name *Diodontosaurus pedroanum* was certainly not a nomen nudum (paras. 2 and 5 of the application). It was also noted that, although Mones (1986) was cited in para. 5 of the application as listing *Diodontosaurus pedroanum* as a distinct taxon, he had listed *Dinodontosaurus* with five included nominal species under the family STAHLECKERIIDAE Cox, 1965, but had noted *Diodontosaurus pedroanum* only as '?STAHLECKERIIDAE incertae sedis'.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to revote on the proposals published in BZN **49**: 53. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 16: Bayer, Bock, Cocks, Cogger, Corliss, Heppell, Mahnert, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Thompson, Trjapitzin, Willink

Negative votes — 8: Bouchet, Hahn, Holthuis, Kabata, Lehtinen, Macpherson, Martins de Souza and Štys.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Dinodontosaurus Romer, 1943, *Bulletin of the Museum of Comparative Zoology, Harvard University*, **92**: 336.

Diodontosaurus Caldas, 1936, *Revista Instituto Historico e Geografico do Rio-Grande-do-Sul*, **16**: 249.

turpior, *Dicynodon*, Huene, 1935, *Die fossilen Reptilien des südamerikanischen Gondwanalandes an der Zeitenwende. Ordnung Anomodontia*, Lieferung 1, p. 76.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

On the proposed conservation of *Lironeca* Leach, 1818 (Crustacea, Isopoda) as the correct original spelling. L.B. Holthuis; A. Brandt; N.L. Bruce 67
On the proposed conservation of usage of the generic names *Melanophila* Eschscholtz, 1829 and *Phaenops* Dejean, 1833 (Insecta, Coleoptera). S. Bílý & C.L. Bellamy. 70
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BULLETIN OF ZOOLOGICAL NOMENCLATURE

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Notices

(a) *Invitation to comment*. The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles*. At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications*. The following new applications have been received since going to press for volume 52, part 1 (published on 30 March 1995). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Fessisentis friedi* Nickol, 1972 (Acanthocephala): proposed conservation of the specific name. (Case 2959). D.F. McAlpine.

(2) *Hemidactylus garnotii* Duméril & Bibron, 1836 (Reptilia, Sauria): proposed conservation of the specific name. (Case 2960). H.M. Smith, A.G. Kluge, A.M. Bauer & D. Chiszar.

(3) *Alcyonidium mytili* Dalyell, 1848 (Bryozoa): proposed designation of a replacement neotype. (Case 2961). J.S. Ryland & P.S. Cadman.

(4) D.L.G. Karsten (1789), *Museum Leskeanum*, vol. 1 (Regnum Animale): proposed suppression for nomenclatural purposes. (Case 2962). G. Rosenberg.

(5) *Alucita erxlebella* Fabricius, 1787 and *Tinea imella* Hübner, [1813] (currently *Roeslerstammia erxlebella* and *Monopis imella*; Insecta, Lepidoptera): proposed conservation of the specific names, and of *Roeslerstammia* Zeller, 1839, by the replacement of *R. erxlebella* syntype by a neotype. (Case 2963). P. Huemer.

(6) S.D. Kaicher (1973–1992) *Card Catalogue of World-Wide Shells*: proposed suppression for nomenclatural purposes. (Case 2964). A.R. Kabat.

(7) *Siboma atraria* Girard, 1856 (currently *Gila atraria*; Osteichthyes, Cypriniformes): proposed conservation of the specific name. (Case 2965). C.R. Gilbert.

(8) *Dacus latifrons* Hendel, 1915 (currently *Bactrocera latifrons*; Insecta, Diptera): proposed precedence of the specific name over that of *D. parvulus* Hendel, 1912. (Case 2967). I.M. White & N.J. Liquido.

(9) *Biselachista* Traugott-Olsen & Nielsen, 1977 (Insecta, Lepidoptera): proposed confirmation of *Elachista freyi* Staudinger, 1870 as the type species. (Case 2968). E. Traugott-Olsen.

(10) *Bombycilla cedrorum* Vieillot, 1808 and *Troglodytes aedon* Vieillot, 1809 (Aves, Passeriformes): proposed conservation of the specific names. (Case 2969). M.R. Browning & R.C. Banks.

(11) *Tyrannula minima* Baird & Baird, 1843 (currently *Empidonax minimus*) and *Contopus pertinax* Cabanis & Heine, 1859 (Aves; Passeriformes): proposed conservation of the specific names. (Case 2970). R.C. Banks & M.R. Browning.

(12) *Sepia orbigniana* Férussac in d'Orbigny, 1826 (Mollusca, Cephalopoda): proposed conservation of *orbignyana* as the correct original spelling of the specific name. (Case 2971). G. Bello & A. Minelli.

(13) *Stilpon* Loew, 1859 (Insecta, Diptera): proposed conservation. (Case 2974). J.M. Cumming & N.L. Evenhuis.

(14) *Metaphycus* Mercet, 1917 (Insecta, Hymenoptera): proposed precedence over *Aenasioidea* Girault, 1911. (Case 2975). J.S. Noyes & J.B. Woolley.

(d) *Ruling of the Commission.* Each Opinion, Declaration or Direction published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*

Call for nominations for new members of the International Commission on Zoological Nomenclature

The terms of service of the following members of the Commission will end at the close of the general session planned in conjunction with the International Congress of Systematic and Evolutionary Biology (ICSEB V) to be held in Budapest between August 17–24, 1996: Dr F.M. Bayer (U.S.A., Corallia); Prof J.O. Corliss (U.S.A., Protista); Prof Dr G. Hahn (Germany, Trilobita); Prof Dr O. Halvorsen (Norway, Parasitology); Dr Ya.I. Starobogatov (Russia, Mollusca); Dr V.A. Trjapitzin (Russia, Hymenoptera). Additional vacancies will exist following the retirement of Prof L.B. Holthuis (The Netherlands, Crustacea) and Prof A. Willink (Argentina, Hymenoptera). All zoologists attending ICSEB will be able to take part in elections to the Commission.

The addresses and specialist fields of the present members of the Commission may be found in the *Bulletin of Zoological Nomenclature*, **52**(1): 3–4 (March 1995).

The Commission invites nominations, by any person or institution, of potential candidates for membership. Article 2b of the Constitution prescribes that:

> 'The members of the Commission shall be eminent scientists, irrespective of nationality, with a distinguished record in any branch of zoology who are known to have an interest in zoological nomenclature.'

(It should be noted that 'zoology' here includes the applied biological sciences (medicine, agriculture, etc.) which use zoological names).

Nominations made since June 1990 will be reconsidered automatically and need not be repeated. Additional nominations, giving the age, nationality and qualifications (by the criteria mentioned above) of each nominee should be sent by 1 June 1996 to: *The Executive Secretary, International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*

Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was set up on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission will be published in mid-1995, entitled '*Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6).

The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death. It contains 14 full-page pictures of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington, D.C. 20560, U.S.A. The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment should accompany orders.

Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895; there are about 9,900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France), Prof. A. Minelli (Italy) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

Fourth Edition of the International Code of Zoological Nomenclature

A Discussion Draft of a new (fourth) edition of the Code is now available. Copies are being sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution.

Discussion Draft of the Fourth Edition of the *International Code of Zoological Nomenclature*

The current (Third) edition of the Code was published in February 1985. It was inevitable that some constructive suggestions made before that time could not be incorporated, and many others were prompted by the appearance of the new edition. In 1988 the International Commission on Zoological Nomenclature set up an Editorial Committee to work towards an eventual Fourth Edition and published an invitation to zoologists to submit further recommendations. Many have been received, and the Commission is grateful to all those who have assisted it. The Commission held open meetings in 1988 (Canberra), 1990 (Maryland) and 1991 (Amsterdam) for preliminary discussion of proposed improvements to the Code, many of them intended to meet changing needs and rapidly evolving communication techniques.

The Editorial Committee met in Hamburg in October 1993 and reviewed each Article of the existing Code in the light of the above discussions and all the suggestions which had been made. The Editorial Committee now offers to all zoologists and other users of scientific names, and to the full Commission itself, a Discussion Draft of the Fourth Edition. Under Article 16 of its Constitution the Commission will take into full consideration all comments made on the Draft within one year of its original distribution (that is, by the end of May 1996). It is hoped that it will be possible to publish the new Edition, with the approval of the International Union of Biological Sciences, in 1996 and that its provisions will take formal effect (superseding the current edition) on 1 January 1997. To achieve this timetable, and more importantly to ensure that the Code will meet the needs of its users, zoologists and others are now invited to submit comments on the Discussion Draft.

The Editorial Committee has been guided by the principle that scientific names are labels for taxa and provide the only universal means of accessing zoological information. Stability in their application and form, consistent with taxonomy, is therefore of paramount importance irrespective of any priority or linguistic consideration. This aim to maintain stability must take precedence over the tools that the Code uses to promote it. Thus, while priority remains the basis for determining validity, and linguistics the basis for the formation of names, neither is an end in itself. Under the changing circumstances of science these and other means of promoting stability must be reviewed for each new Edition. This has been done and the major changes proposed reflect that view. Like all zoologists, members of the Editorial Committee recognize that many names in current use are in breach of the existing Code and that no scientific purpose would be served by continuing to make them vulnerable to change for purely formal reasons. In the proposals for the Fourth Edition every effort has been made to ensure that names in present use will remain valid when the new Code comes into effect, or that they can be easily validated.

The proposed Edition differs from earlier ones in enabling zoologists, wherever possible, to adopt automatic solutions directly, rather than requiring them to defer decisions until the Commission has determined the outcome in response to formal applications. It is emphasized that in every such case the proposed 'do-it-yourself'

solution involves consultation with workers interested in the field. Recourse to the Commission remains in the event of disagreement and as a safeguard against abuse.

The notes below are intended to draw attention to the main proposals which distinguish the Discussion Draft from the current Code, and to indicate some of the reasons for making changes; the Draft itself must be consulted for details of the Articles and Recommendations. For the sake of continuity the order of Articles in the existing Code has been retained. The Draft does not contain the indexes, appendices and glossary which will be in the definitive Code, nor proposed amendments to the Commission's Constitution (see BZN **52**: 6–10).

I. Additional requirements for the availability of names first published after 1996

Several proposals are made to improve the unambiguous definition and typification of new nominal taxa and the recognition and accessibility of their names. In practice the great majority of names published in recent decades meet the suggested requirements, but these will not apply retrospectively.

(a) *Species-group taxa.*

(i) The new nominal species or subspecies must be explicitly indicated as being new [Art. 16e].

(ii) The name-bearing type (a holotype, or syntype series) of the new nominal taxon must be unambiguously designated [Arts. 16e, 72c].

(iii) The diagnosis of the taxon must include a summary of characters which are considered to differentiate it from at least one other of the same rank (i.e. related species or subspecies) which must be cited by name [Art. 16a].

(iv) The diagnosis must be given in a language which uses the Latin alphabet; it is recommended that the diagnosis should be given in a language which is widely used, and also in those of the regions relevant to the taxon [Art. 16b].

(v) A new name must be recorded as such in the *Zoological Record* within five years of its first publication; if it is not, it is deemed not available from that publication [Arts. 8e, 11b]. Procedures and safeguards are recommended. Mandatory listing in the *Zoological Record* (which is accessible on paper, compact disk, and electronically) means that only this single source will need to be searched for the existence of new names.

(b) *Genus-group taxa.* The new requirements are the same as those given above, with the necessary changes of wording [Arts. 16, 11b]. The designation of a name-bearing type (i.e. type species) is already required [Art. 13c], and this is now extended to new ichnogenera (genera of trace fossils) [Arts. 16d, 66].

(c) *Family-group taxa.* The additional requirements are entirely analogous to those mentioned above. It is proposed that the name of the type genus must be explicitly cited [Art. 16c].

II. Use of the term 'epithet' in species-group names

Because there has been some confusion betwen the 'name of a species' (which is a binomen) and the 'specific name' (the word in the binomen which denotes the species), it is proposed that 'specific name' be replaced by 'specific epithet'. The same applies to 'subspecific epithet'. This change is in harmony with the *International Code of Botanical Nomenclature.*

III. New provisions relating to the application of the Principle of Priority

Although priority is the main criterion in determining the validity of competing names the draft makes provisions enabling zoologists to depart from it in

some situations, without recourse to the Commission as required by the present Code.

(a) *Conservation of junior synonyms.* When a senior synonym has not been used as valid in the previous fifty years and a junior name has been universally used in this period then the junior name is to be given precedence [Art. 23j].

(b) *Conservation of subsequent spellings.* Providing the same criteria as mentioned for junior synonyms are met, a subsequent spelling of a name which is different from that first published is to be accepted as the correct original spelling [Art. 33d].

(c) *Usage of family-group names contrary to priority.* If two family-group names are in general current use such that the taxon denoted by the senior name (e.g. a subfamily) is included within that (e.g. a family) denoted by the junior name, such usage is to continue even though it is contrary to priority [Art. 35e].

IV. New provisions relating to the typification of nominal taxa

The additional criteria for a name published after 1996 to be available include some relating to type fixation, and these have been mentioned under I above. The draft contains other provisions which relate to typification but do not affect the availability of names, and which propose solutions independent of reference of cases to the Commission.

(a) *Acceptance of name-bearing types found to have been misidentified.*

(i) Family-group taxa: if a zoologist discovers that the type genus had been misidentified when the taxon was established, or that there were errors or overlooked fixations in the typification of the type genus itself, the erroneous nominal fixations actually made should be accepted unless stability is threatened [Art. 41a].

(ii) Genus-group taxa: analogous provisions apply [Art. 70b].

(b) *Lectotype designations after 1996.*

It is proposed that a lectotype designation made after 1996 must give reasons and be unambiguous [Art. 74a].

(c) *Status of neotypes following rediscovery of original type material.*

A validly designated neotype is to be retained as the name-bearing type of a species-group taxon if rediscovery of original type material causes no instability [Art. 75j].

V. New provisions concerning the grammar and spelling of names

Zoologists have spent much time debating matters which are purely of grammar or spelling, and many destabilizing name changes have been caused as a result. Very few modern zoologists are at ease with Latin, although this was the language of international communication to Linnaeus and his successors (who, even so, were not always rigorous in their grammatical practices). Even fewer have any knowledge of classical Greek. The draft Code attempts (i) to respect the names of the past but to preserve them in the forms in which they have been used in modern times, (ii) to avoid name changes, i.e. obstacles to information retrieval, made for non-taxonomic reasons, and (iii) not to regulate or 'correct' the spelling of new names. The new provisions will no doubt be controversial, but the Editorial Committee hopes that criticism of them will be for zoological or practical reasons and not simply on linguistic or historical grounds. The following changes are proposed.

(a) *Gender of generic names.*

It is proposed that after 1996 generic names should be regarded as words having no gender and therefore not affecting the spelling of adjectival specific epithets (e.g.

albus, *-a*, *-um*) combined with them [Art. 30]. Consequent on this, the Editorial Committee offers two alternatives [see Arts. 31b, 32c and 48] for discussion, as follows.

Either: (i) After 1996 the original ending of such an epithet is to be used in all combinations, whether or not the combination is new and whether or not a change in an existing binomen results; *Or*: (ii) the ending of such an epithet is to remain as it is in an existing combination (so a binomen already in use for a species remains unchanged), but in new combinations first published after 1996 the original ending of the epithet is to be used.

(b) *Acceptance of incorrect spellings.*

(i) The original spelling of an adjectival species-group epithet first published after 1996 should be accepted as correct, even if its gender ending is grammatically improper in the original combination [Art. 31b].

(ii) Certain endings of species-group epithets that are formed from personal names are to be treated as identical: thus spellings such as *smithi* and *smithii* are permissible variants [Art. 31b].

(iii) If an incorrect spelling of a name has been generally accepted that spelling is not to be changed [Arts. 29d, 33d].

(iv) A new family-group name may be formed by adding the appropriate ending (e.g. -IDAE, -INAE) to the entire name of the type genus, rather than only to its stem [Art. 29a,c]. This may be necessary to avoid the new family-group name being a junior homonym of one based on another generic name which has the same stem. The spelling of a new family-group name should not be emended by reason of a grammatically incorrect stem [Art. 29c]. If a disused family-group name is a senior homonym of one in use its stem may be emended so as to conserve the junior name [Art. 55c].

VI. Adoption of Lists of Available and Potentially Valid Names

In some taxonomic fields workers may wish to establish lists of names at particular ranks (e.g. the family-, genus- or species-groups) which will automatically take precedence over any relevant names not listed [Art. 78j], so that the listed names and name-bearing types may be used with confidence (taxonomic validity being left, as always, to individual judgement). Procedures are proposed [Art. 77] for the adoption by the Commission of such Lists, it being made clear that adoption will be only in response to initiatives by zoologists interested in the relevant taxonomic field and that extensive consultations will always be needed before the adoption of such a List.

The Preface to the current (1985) edition points out (p. xii): 'No Code is perfect. None will please everyone. Indeed, it is unlikely that any Code would be completely satisfactory to any individual'. Some of the innovations proposed for the Fourth Edition will be controversial, but the Editorial Committee believes that the Discussion Draft provides a significant advance for the future while respecting and preserving the names of the past.

We urge zoologists to test the changes proposed by the Editorial Committee constructively and without prejudice, with the needs of the wider biological community in mind, and with awareness of the changed circumstances of taxonomists today. We ask those who are not specialists but who use scientific names, in whatever way, to make suggestions so that the Code will meet their needs. We are aware that we are asking those who will comment on the proposals and those who will vote on their adoption, who are mostly specialists located in long-established centres, to

review proposals sympathetically even though many will consider them unnecessary in their own situations. The most important of these changes, if adopted, will widen the medium of publication beyond print media into an electronic age, will reduce dependence upon expensive and comprehensive library holdings and ancient works for nomenclatural searches, and will make familiarity with classical Latin and Greek grammar unnecessary.

We look forward to receiving suggestions that will improve the proposals, and for support that we are confident will result in the Commission and the International Union of Biological Sciences adopting on behalf of zoologists and users of scientific names a Fourth Edition that will more effectively meet the needs of the 21st century than could its predecessor.

O. Kraus
President

W.D.L. Ride
Chairman, Editorial Committee

The International Commission on Zoological Nomenclature

NOTE. Since the Discussion Draft is subject to amendment **the provisions set out in it have no force, and it is to be used exclusively for the purpose of formulating possible improvements**. These should be sent to the address below by 31 May 1996.

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Comment on *Towards a harmonized bionomenclature for life on Earth* (Hawksworth *et al.*, 1994)

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Introduction '*Whatever, and however little, we may think about such things, we are all of us bound to have some taxonomic concepts.*' (Cain, 1959c, p. 302.)

The momentum towards a 'harmonized bionomenclature for life on Earth' seems sufficiently strong to suppose that it is broadly embraced by biologists (IUBS, 1994). The number and diversity of biological and nomenclatural organizations who participated in an exploratory meeting in 1994 (Hawksworth *et al.*, 1994, p. 213) documents the scope of the effort. Hawksworth *et al.* (1994) have summarized some points that are areas of concern in a 'harmonization' of bionomenclature. However, the direction, in our view, is leading toward nomenclatural procedures and 'protected' lists of names that will result in a systematic bipartisan nomenclature for life on Earth—and that seems to be contrary to harmonization.

Intention of a Harmonized Bionomenclature

We agree with the principle of a harmonized bionomenclature, and we believe that a set of panregnal rules can be effectively implemented. This supposition is substantiated if the range of input from the roster of biologists and organizations represented at the 1994 exploratory meeting correctly reflects the range that would go into drafting a unified Code. The development of such a Code, including a much-needed glossary of biological nomenclature such as envisioned in the draft by Hawksworth (1994), would facilitate communication and decrease misunderstanding between systematists and other practising biologists.

Our concerns are about the role of standardized versus protected lists of organisms. There is bound to be some conflict between a unified Code and independent programs of nomenclatural standardization, because the existing, progressing programs have been brought into being without the benefit of a harmonized bionomenclature. Some lists may have to be revised to reflect the provisions of a unified Code. Some lists, wholly or in part, may become antique nomenclatural relics if a unified Code mandates lists of protected names.

The taproot of a unified Code of bionomenclature, as outlined by Hawksworth *et al.* (1994, p. 203), is the 'protection of Names in Current Use (NCUs)'. This could take the form of 'block conservation' (against specified other names) or of 'a new starting document which devalidates all unlisted names'; in the latter case names omitted from the list could 'be reinstated, then taking priority only from the date they are revived'. This passes far beyond the scope of such documents as the 'Official Lists and Indexes' of names issued by the ICZN, or the lists of conserved names that appear in the *International Code of Botanical Nomenclature* (Greuter *et al.*, 1994),

which reflect names conserved by plenary actions of international Commissions of nomenclature. Our assertion here is that the implementation of global lists of NCUs, as lists of 'protected names', may serve the intended purpose of stabilizing nomenclature for a greater set of practising biologists, but it is bound to destabilize work by the smaller, driving set of systematists. As we indicate below, there are many standard lists already in existence which fill the need for convenient reference by practising biologists and non-taxonomists. These standard lists have the great advantage that they can be periodically updated so as to reflect changes in systematic opinion; they are not rigid and 'infallible' lists of protected names.

Hawksworth *et al.* (1994, p. 192) indicated that a 1991 meeting of the International Union of Biological Sciences (IUBS) and the International Association for Plant Taxonomy (IAPT), on the stability of names (see Hawksworth, 1991), was convened because of the recognition 'that name changes for non-scientific reasons continue to inconvenience all users of the scientific names of organisms'. Hawksworth (1993) previously discussed the desirability of avoiding 'name changes for purely nomenclatural reasons'.

Hawksworth *et al.* (1994, pp. 189–191) have summarized the conclusions agreed by the 1994 exploratory meeting. Among them (item no. 4, p. 190) is the consideration 'that the availability of lists of published names, and the registration of new names in bacteriology, botany, virology and zoology, will make possible the harmonization of nomenclatural procedures in biology.' Indeed, Hawksworth (1992) has already elaborated upon 'the need for a more effective biological nomenclature for the 21st century'; there he called for the construction of lists of 'nomenclaturally protected names' and 'registration procedures' for new names.

The concept of registration is a broad one — it encompasses individual names as well as the publications in which they appear; it brings into reach the concept of 'protected' names and 'approved' publications. Although bacteriologists already subscribe to the principle of approved names, and the registration of new names only in the *International Journal of Systematic Bacteriology* (Skerman *et al.*, 1989; Hawksworth *et al.*, 1994, p. 204), outside this specialized discipline it should not be the function of an international Commission to either 'approve' or 'register' names or publications. A Commission can better serve biologists by establishing the means to formally collate names into nomenclators whose purpose is to document the existence (or availability) of the names; it should not drive systematics. Indeed, one of the primary missions of Systematics Agenda 2000 is 'to organize the information derived from this global program in an efficiently retrievable form that best meets the needs of science and society' (Systematics Agenda 2000, 1994, p. 1).

Hawksworth *et al.* (1994, p. 204) mention that for zoological names *Zoological Record*, published by Biosis International, 'is the proposed *de facto* registration office for new names'. We point out that Bouchet & Rocroi (1992, 1993) and Edwards & Thorne (1993) have discussed the significantly incomplete coverage of names of mollusks in *Zoological Record*. We are unaware of similar comparisons in other disciplines, but it would be worthwhile to make similar investigations for other zoological groups, and to first develop criteria to improve the recording of taxa.

A harmonized bionomenclature should be one that works for biologists; it should include the definitions of the purpose and components of taxonomic registers, and how they are to be updated; it should not identify 'approved' taxonomic registers. A

unified Code should create the means to more judiciously disseminate taxonomic names to biologists around the world.

'Standard' or 'Protected'? Bionomenclature or Bi-Nomenclature?

Nomenclators striving for comprehensiveness have been published since the mid-19th century. Modern ones exist for many aspects of zoology and botany, for which citations are nearly superfluous. These include such principal sources as *Zoological Record*, issued yearly since 1864 in parts organized by major taxonomic groups (with a gap 1907-1914 that was filled by the *International Catalogue of Scientific Literature*, [Part] N, *Zoology*); *Index Animalium* (Sherborn, 1902–1933); *Nomenclator Zoologicus* (Neave *et al.*, 1939–1993); *Index Kewensis*, the nomenclator for flowering and seed-bearing plants, begun with Jackson (1894–1895), followed by 21 supplements to date; and the *Index Nominum Genericorum* (*Plantarum*) (Farr *et al.* 1979, 1986). A CD-ROM amalgamation of Neave's *Nomenclator* and *Zoological Record* has been proposed for generic names. Specialized nomenclators for major organismic groups also exist; for example, the *Catalogue of the Fossil and Recent Genera and Species of Diatoms and their Synonyms* (VanLandingham, 1967–1979), the *Treatise on Invertebrate Paleontology* (Moore *et al.*, 1953–1992), or *Fossilium Catalogus*, published in two series, 'I: Animalia', since 1913 thus far in 134 parts, and 'II: Plantae', since 1913 thus far in 95 parts). All of these, while indispensable, are principally reference works; they record taxonomic nomenclature usually at the level of genera and species. Some, such as Sherborn and Neave, do not deal with synonymization; others, such as VanLandingham, do list taxa according to senior and junior synonyms.

Beyond the nomenclator is the 'standard list', for which a formal definition is lacking (cf. Hawksworth, 1994). Generally, a standard list is an itemization of taxa known to occur in a region (for geographic lists) or in a systematic group (for systematically organized lists). There is already significant momentum toward nomenclatural standardization through the publication of standard lists. This is being accomplished within different systematic groups as well as for separate geographical areas. Such lists have been prepared by individual researchers, and by consortia and committees of professional biologists working at the behest of organizations and governmental agencies. The organization and function of each list reflects the intended use of the list; some are taxonomic and nomenclatural guides (e.g., *Dermapterorum Catalogus* (Sakai, 1970–1995), *Catalog of the Genera of Recent Fishes* (Eschmeyer, 1990)), some reflect international concerns that provide guidance for national and internal programs of regulation and conservation (such as lists of endangered and threatened organisms; e.g., Groombridge, 1993), and others are more bureaucratic in scope (such as candidate review lists of endangered or threatened species; e.g., U.S. Fish and Wildlife Service, 1994). Standard lists are inherently biased; they are compromised by arbitrarily selecting one named taxon to represent what, in the opinion of some systematists, might be identified as another or several taxa. Some lists are simple listings of names, sometimes accompanied by directories of common names (e.g. Hart, 1994), while others are themselves contributions to systematics.

We can cite examples largely from among the rapidly accumulating standard lists of organisms in North America, but lists for other regions of the world, and for the

whole world, are also becoming available. For instance, the American Fisheries Society produces a series of lists that are on a cycle of revisions appearing every ten years. They itemize recently named new species and necessary nomenclatural changes; changes are explained and justified in the texts. Currently there are checklists for fishes (Robins *et al.*, 1991), mollusks (Turgeon *et al.*, 1988; second edition in review), decapods (Williams *et al.*, 1989), and ctenophorans and cnidarians (Cairns *et al.*, 1991). Among works in review or in preparation are the volumes on crustaceans, annelids, aquatic insects, echinoderms, sponges, bryozoans, and 'miscellaneous' groups.

The Check-List of European Marine Mollusks (CLEMAM) is a current project for the development of a checklist of the marine mollusks of Europe, and many European countries are developing maps and lists of land and freshwater mollusks. Insect groups, particularly those of agricultural concern, have been the subject of extensive lists from early in the 20th century. Standard lists exist for the Orthoptera of the world (Otte, 1994a-c), birds of the world (Sibley & Monroe, 1990) and mammals of the world (Nowak, 1991; Wilson & Reeder, 1993). The Food and Agriculture Organization (FAO) of the United Nations produces an extensive series of annotated world catalogues of 'Species of Interest to Fisheries'. Lists are now playing an important part in endangered-species programs such as those under the U.S. Fish and Wildlife Service, the International Union for the Conservation of Nature (IUCN), and aspects of the Convention on International Trade in Endangered Species (CITES) that regulates importation and exportation of some biological materials. Regional floras are equally ambitious in their presentation, ranging from simple taxonomic lists to systematic revisions.

Systematic monographs that are themselves standard lists include, for example, the *Land Mollusca of North America* (*North of Mexico*) (Pilsbry, 1939–1948), and *The Diatoms of the United States* (Patrick & Reimer, 1966, 1975). Problems are met when attention is turned away from taxonomic groups that either have economic importance (as with agriculture) or are well-studied in developed parts of the world. Also, the paucity of systematic investigators in some groups of organisms ensures that there are many antiquated taxonomic lists that have little hope of being updated soon, and we question how 'protected' lists will affect the taxonomy of these groups. Additional concerns are seen by some researchers who disagree with the identity of taxa that appear in the standard lists. This disparity results from redirected focuses of biological education and from a skewed distribution of researchers both geographically and taxonomically.

Systematics Agenda 2000, a consortium of taxonomic and systematic societies working in cooperation with the Association of Systematics Collections, has developed a long-range plan for describing the remaining undescribed species in the world in the next 25 years (Systematics Agenda 2000, 1994). The plan is divided into three missions: to inventory, to describe diversity and develop a predictive classification of life on Earth, and to put all of this information into an efficiently organized database. Some ideas for a global database have been enacted by Species 2000, a World Species Enumeration program adopted in 1994 by the IUBS. The kinds of databases envisioned by these projects have the potential to serve as the basis for a global nomenclator of names.

We agree that the compilation of regional or global lists of taxa should be conducted by specialist societies for the region or taxonomic group concerned. Regional lists thus can be incorporated into a global list by the international society representing the taxonomic group; for example, Unitas Malacologica could oversee the development and production of a global list of mollusks. But all lists must be developed by those systematists working on the groups, to be complete and effective. The role of the major systematic societies is to facilitate the interaction of the specialists and to provide the incentive for development of these lists. The role of an international Commission of nomenclature should be to coordinate the progress of the systematic societies and smaller groups who are working with organisms for which there are no international societies. Extending further the utility of databases, we cite the example of the North American Diatom Ecological Database (NADED; Charles & Acker, 1994), which applies itself to both modern and paleoecological investigations; it is founded upon a standard list of diatoms but, being in a database format, it can be correlated to other taxonomic listing schemes.

The concentration of biological work today is less upon systematics and taxonomy and more upon applied work which demands specific taxonomic criteria by which to report its findings. Thus it is usually in environmental studies that the 'inconveniences' of taxonomic citations in 'non-scientific' contexts arise. Once a standard list is available for taxonomic groups or regional censuses, systematists and other research biologists who have need to pay attention to the details of taxonomy will develop their own 'working lists', probably with synonymies pointing to the standard or protected lists. The purpose of many of the existing standard lists of organisms is to be a 'working list'.

Central to the problem of 'non-scientific' uses of scientific names is nomenclatural change resulting from the application of the principles of priority and homonymy; for names to have fuller meaning and unique identities the author and date are appended. The 1994 meeting recommended (Hawksworth *et al.*, 1994, p. 190) 'that, considering divergent rules and traditions concerning author citations for scientific names, use of such citations be made optional (and be recommended only in a strictly taxonomic context) ...'. The importance of author and date to the principle of priority, and to the effective treatment of homonyms especially in botany, was recognized (pp. 201–202). It was suggested (p. 202) that 'protected lists of some kind' could effectively deal with problems in the future. This we believe can contribute to a dichotomous Code, in part controlling lists for 'non-scientific' uses, and in part controlling special applications of formal taxonomic nomenclature for 'scientific uses'. Hawksworth *et al.* (1994) intimated, too, that citations may be omitted for 'familiar' taxa, as is the practice in bacteriology and zoology. What is to determine the limits to 'familiarity'? The practice extends even to the binomen itself, as with the case of the *E. coli* bacterium, and further, to non-binomial familiarity as with the monospecific fossil avian genus *Archaeopteryx*. Such scientific names essentially have attained the status of common names, much as with alligator or gorilla.

The use of the author and date of the original publication of a scientific name is absolutely imperative to locate the original publication in which (in the case of zoology) the nominal taxon was proposed or in which (in the case of botany) the

epithet was created. Yu (1993), recognizing the problem in zoological nomenclature, proposed a system to deal with the original and subsequent combinations of a species-group name. Spamer & Bogan (1994) pointed out that the problem was a limitation of technology, not one of nomenclature, and that there are ways to deal with the perceived problem with author and date without making the system unwieldy. The proposed elimination of complete scientific names in non-taxonomic works is an attempt to bypass the same problem which caused Yu to construct a polynomial nomenclature — except that in Yu's system the identity of the original name was not lost.

Without the correct association of author and date, any database or list is useless. A standard list would, of course, include the author and date of a name; but establishing it as a 'protected list', without provisions for periodic updates, creates a punctuated equilibrium for the taxonomy of the group so listed. It encourages the creation of nomenclaturally invalid 'working lists', which would be updated only as frequently as there is a perceived need (or possibly even as infrequently as funding will allow). Taxonomic groups that have few practicing systematists will, as they do now, suffer for the lack of an adequately modern key. The end result is a bi-nomenclature consisting of sanctioned lists and systematically updated 'working' lists. The implementation of protected lists mandated by a unified Code of bionomenclature is bound to formalize a bipartisan kind of scholarship—one for common use or quick reference by non-scientists and reconnaissance biologists, the other for the more specialized work of systematics. It is possible that works in systematics will have to adopt the protected lists in order to declare themselves valid for the purposes of taxonomic nomenclature, a confining and arbitrary regulation in an aspect of science which admits itself even now to study sets of artificially derived 'relationships' between organismic groups.

A unified Code of nomenclature will have to consider that a bi-nomenclature can exist for any given taxonomic group. The Code will have to formally address the bipartisan use of scientific names, one in an 'non-scientific' context, the other in a 'scientific' context. The protected list of names will be one kind of nomenclator; it will include arbitrated authors and dates for taxa, possibly resulting in citations that are contrary to the principles that are in use now but with which there are many perceived problems. Another kind of nomenclator will be the systematically precise list that may follow the traditional principles of rules and Codes that have been developed mainly in the 20th century; these are bound to appear in the literature despite the provisions of a unified Code. In the middle fall specialized indices that will in some way have to be correlated with the standard lists; for example, the *Index to Plant Chromosome Numbers* (latest instalment by Goldblatt & Johnson, 1994). To moderate the different rules, a unified Code will have to clearly indicate the derivation of its Articles, and the purposes for which they deviate from the Articles of existing Codes. A correlation between the Articles of previous Codes and a unified Code will be indispensable — it should be mandatory (see for an example Greuter *et al.*, 1994, pp. xvi–xvii).

Irrespective of the extent to which scientific names are pruned, and to what length the procedures of taxonomic nomenclature are made less formal in non-taxonomic contexts, standard lists will have much less utility if information about them is not disseminated to biologists worldwide. So long as broad changes may be in the offing

for taxonomic nomenclature, international Commissions of nomenclature should at least establish the means to document standard lists and aggressively make the information widely aailable.

Lists, Surveys, Systematics, and Education

Biological surveys have placed great demands upon systematic and nomenclatural resources. Working often against deadlines, biologists are increasingly having to resort to quick, incomplete, or adopted identifications of organisms. Placed usually in an environmental context, these surveys are often having to determine, without much time to question, the taxonomic identities of a panregnal set of organisms. Depending upon the context or objective of the survey, or the taxonomic abilities of the investigators, identifications may mix levels of precision in a single report: species, genus, or suprafamilial group, sometimes even to undivided class; at the extreme end, too, is often a category for 'Other' organisms.

Aside from the constraints of time, money and skill, there are many reasons for the variety of taxonomic laxness that is perceived in some surveys. The end product is usually directed to administrative purposes; the end users themselves are most often not scientists. To the lay reader, a species is a species, without much ambiguity; the finer points of morphological variation, even hybridization, are extraneous; the concepts of taxonomic nomenclature are superfluous. The abstracted approach to taxonomy, directed by pragmatic constraints of bureaucracy and fiscal accountability, has contributed to the decline of systematics and 'alpha taxonomy' in education. Practical training is more in 'biodiversity' and applied ecology. Schools today are turning out a new community of environmental and biological investigators, students who have had only very focused training in some aspects of taxonomy and systematics. It is this same group of people who are charged with establishing the identity (and thus also the systematic placement) of the estimated '12 to 118 million' species living on Earth that have not been scientifically described (Groombridge, 1992).

To accomplish the goal of rapid biological reconnaissances, workers are looking toward very streamlined introductions to taxonomic identification. The only way to make this possible is through easily usable keys and standard lists; it leaves little room for reinterpretation, which is beyond the scope of the environmental survey and left to systematic studies. 'Training' of non-specialist workers will be pitifully brief, in some cases less than a day (Beattie & Oliver, 1994), and thereafter great reliance is placed on the key and list. These are the very people who will be the significant contributors of taxonomic identifications in biodiversity databases and indices, which in turn will be the legislative tools for environmental monitoring and regulation. Ravera (1995, p. 2) has pointed out that biodiversity data based on less expensively and more quickly assembled data are preferred over 'more scientific methods', and that the literature on the application of diversity indices to specific ecological problems is far smaller than the literature on quantitative determinations of diversity. The trend is clearly toward non-specialists, directed only peripherally by trained workers, deriving data that must seem to unambiguously guide non-scientists in their efforts to moderate environmental and social problems. The methods will not be encumbered by non-essential academic aspects, such as a precisely regulated taxonomic nomenclature.

Central to the work of the next generations of biologists will be the computerized database. Making the information in it widely available and reliably updated are major tasks that have gone neither unnoticed nor without consideration of the manifold applications to biological research and social projects (Systematics Agenda 2000, 1994). These databases are founded upon the data in biological collections (Hawksworth & Mound, 1991), which in turn are the sets of voucher specimens upon which standard lists are compiled. We ask whether then there is the need to establish 'standard collections'? We question how the identifications of organisms in other collections will be adequately correlated with the names that appear in standard lists, for if an identification in the collection does not correspond to one in the list of 'approved' names, will ambiguity thus be introduced to 'non-scientific' work?

We challenge the developers of a unified Code of nomenclature to devise the means by which systematics, so crucial toward understanding what we mean by 'life on Earth', is not sterilized further by making it more difficult to understand how the previous three centuries of biologists defined 'life on Earth' (for concepts, see for example Cain, 1956–1962; Cole, 1984; Hawksworth & Bisby, 1988; Starobogatov, 1991). If we are to recreate taxonomy for 'non-scientific' purposes, should we perhaps turn toward the numerical lists of taxa which have been attempted in the past (Heppell, 1991)?

Conclusion

Biologists speak of nomenclature 'in the 21st century'; it is nigh. Checklists of organisms will be the guides for the next generations of biologists. Accordingly, we are to presume that if an organism cannot be assigned to a name that appears on one of the standard or approved lists, it could be construed as being new to science. The rigorous aspects of author, date, and priority for all taxonomic work back to the time of Linnaeus are, in part anyway, thus relegated to the oversight of historians of science. We purposely avoid here an emotional debate that could ensue, about the wisdom of such an approach to biology, but we will admit that biological research as we know it has changed already; it is not something that will happen 'in the next century'. The rules do now need to catch up. It is important to consider that a panregnal series of standard, updatable lists of scientific names can do much to stabilize current nomenclature, and that lists of protected names ('NCUs') can introduce confusion into the methods of subsequent recognition of species and higher taxa. There will be workers who need to study the broad literature of systematic biology prior to the implementation of a unified Code. It will be a task of Herculean proportions to correlate the names in the 'antique' literature of the first three centuries of modern biological work with the names conserved by a 'starting list' of Earth's organisms.

Work toward a unified Code of nomenclature will have to very carefully measure the impact of its provisions on the satisfactory identification of organisms; the grand census of life of Earth that we strive toward will depend upon it. The Code also will have to consider the negative effects that an officially sanctioned list of publications can have upon work carried out in less-developed regions of the world, where biologists work under extraordinary conditions that jeopardize the timely and successful dissemination of their work. We must not make it appear that the results of biological work conducted in a technologically and bibliographically richer

environment is more worthy of coordination and dissemination than is the work conducted outside these more fortunate environments.

It is a far greater imperative to disseminate the information of taxonomy than to simply establish sets of rules that will apply differently to different work contexts. A unified Code of bionomenclature, rather than establishing a protected list of taxa, should provide the procedures for the composition and updating of taxonomic registers –standard lists. It would do well to establish the means by which the authors of taxonomic works are responsible for centrally recording the taxonomic acts they make in publications. The Code should provide the criteria by which taxonomic data are then effectively disseminated to the scientific community. 'Availability' means nothing to the researcher who is not informed.

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On the nomenclature of domestic animals

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Introduction

The scientific naming of domestic animals is a problem. Attention was drawn to it by Bohlken (1958, 1961), and the matter was raised again by Dennler de La Tour (1968). Following on these leads, I (Groves, 1971; BZN **27**: 269–272) applied to the Commission to have names given to 'domesticates' excluded from the provisions of the Code. After a few less than supportive comments the proposal sank like a stone. Lost, but not forgotten: Corbet & Clutton-Brock (1984) returned to the question and made their own proposals.

In this short review, I will explain what the nature of the problem is, survey the four different solutions that have been proposed, and make some further remarks of my own.

What is domestication?

One of the founders of modern domestication studies is Charles Reed and it is he (1984) who provides the most authoritative recent discussion of what exactly we mean by 'domestic animals' — those whose breeding is, in theory or in practice, controlled by humans: i.e. not simply tamed, or kept in zoos or laboratories, but controlled such that what is allowed to breed, and what is mated with what, is the criterion. We require also that this process of human control will have been going on for generations, because recently zoos have begun to take the same attitude towards some of their charges, controlling their breeding to maximise diversity for conservation purposes. The corollary to Reed's definition is that the domestic animals will have been altered in some ways — morphologically, behaviourally — from their wild ancestors. In each case there may be alterations meeting several human objectives: horse breeds differentially specialised for riding, racing, or pulling; cattle breeds specialised for beef, milk, or draught; and so on.

The consequence of all this is that a domestic 'taxon' relative to its wild ancestral taxon (1) differs from it but (2) is readily interfertile with it even though (3) in part sympatric with it; moreover (4) it is heterogeneous with respect to it.

Is a domestic 'taxon' — let us call it a *parataxon* — to be regarded as a different species from its wild ancestor? No; though the two may be, often are, sympatric without interbreeding, it is human vigilance alone that prevents them from interbreeding, and when this vigilance is relaxed the two simply merge (see Groves, Ziccardi & Toschi (1966) on the ass and, for a very neatly analysed example, French, Corbett & Easterbee (1988) on the cat). In addition, some domesticates may be derived from different subspecies of the wild ancestral species, or possibly from different wild species, so that a domestic 'species' would in effect be paraphyletic. Yet, at base, the domestic parataxon is in some way conspecific with its wild ancestor.

Is a domestic parataxon to be regarded as conspecific with its wild ancestor, but a different subspecies? No; a subspecies is a geographically delimited, as well as

morphologically differentiated, segment of a species, but, as stressed above, domestic parataxa and their wild ancestral species are often sympatric.

Is a domestic parataxon to be regarded as conspecific with its wild ancestor of which it constitutes a *suite* of subspecies? No; breeds are commonly maintained in sympatry with each other, they are not geographic vicars like subspecies.

Are different domestic breeds to be regarded as different species? No; they are often rather marginally differentiated, and form a potential reproductive continuum.

That is the problem: the dometic animals fit into no taxonomic mould — not even approximately. The Linnaean system, product of the pre-Darwinian era, fares tolerably well when faced with the evolutionary reality; but no juggling of it really copes with the human-created world of domestication.

Names of domestic animals

Corbet & Clutton-Brock (1984) pointed out that in most cases the domestic form of a species was scientifically named earlier than any wild form, often by Linnaeus himself. In the following cases the domestic name antedates (or is contemporary with) the wild one:

Domestic	*Wild*
(1) *Linnaean domestic names*	
Bos taurus (Cattle)	*Bos primigenius* Bojanus, 1827
Bos indicus (Humped cattle)	(Not certain)
Bos grunniens (Yak)	*Bos mutus* Przewalski, 1883
Bubalus bubalis (Water Buffalo)	*Bubalus arnee* Kerr, 1792
Ovis aries (Sheep)	*Ovis orientalis* Gmelin, 1774
Capra hircus (Goat)	*Capra aegagrus* Erxleben, 1777
Camelus bactrianus (Bactrian camel)	*Camelus ferus* Przewalski, 1883
Camelus dromedarius (Arabian camel)	(Not certain)
Lama glama (Llama)	*Lama guanicoe* Müller, 1776
Lama pacos (Alpaca)	(?hybrid, Llama x *L. vicugna*)
Equus caballus (Horse)	*Equus ferus* Boddaert, 1785
Equus asinus (Donkey)	*Equus africanus* Heuglin & Fitzinger, 1866
Canis familiaris (Dog)	*Canis lupus* Linnaeus, 1758
Felis catus (Cat)	*Felis silvestris* Schreber, 1777
Mustela furo (Ferret)	*Mustela putorius* Linnaeus, 1758
Cavia porcellus (Guinea pig)	*Cavia aperea* Erxleben, 1777
Carassius auratus (Goldfish)	*Carassius gibelio* Bloch, 1783
Bombyx mori (Silkmoth)	*Bombyx mandarina* Moore, 1862
(2) *One non-Linnaean domestic name*	
Bos frontalis Lambert, 1804 (Mithan)	*Bos gaurus* H. Smith, 1827

There is just one case where the wild name precedes the domestic name: *Sus scrofa* Linnaeus, 1758 for the Wild Boar vs. *Sus domesticus* Erxleben, 1777 for the domestic Pig. Strictly speaking, Linnaeus's *Sus scrofa* referred to both wild and domestic pig, although from his cited sources the wild form could be construed to have prior claim.

In several other cases the name *domesticus* (or *-a*) has been appended, perhaps not entirely formally, to the name of a wild species (such as *Bos javanicus domesticus*, Bali Cattle); in yet other cases the domesticate does not differ sufficiently from the wild species for there to have been a real qustion of differentiating them quasi-taxonomically (such as *Gallus gallus*, the Domestic Fowl).

This listing demonstrates the problem: in nearly every case the name given to the domestic parataxon has priority. If the rules of nomenclature were strictly followed, the name *Bos taurus* would refer to the wild (extinct) Aurochs as well as domestic humpless cattle.

Solutions so far

The solution offered by Bohlken (1958, 1961) was that one should never use the domesticate's name for the entire species. Instead, when referring to the domestic parataxon one should use the wild ancestral species's name followed by the domesticate's name, with 'f.' (for '*forma*') in between. Thus: *Bos primigenius* f. *taurus* for domestic cattle. The advantage of such a system is that the name of the biological species is referred to, plus a convention to show that an artificial (= domestic) form of it, not a subspecies, is being indicated. The disadvantage is, simply, that it flouts the rules of nomenclature: the prior name is being made subordinate, and an insert, 'f.', is used for which there is no sanction in the present Code. The scheme has, nonetheless, achieved quite wide currency, e.g. it is used by Herre & Röhrs (1990) in their textbook.

Dennler de La Tour (1968) proposed a more complicated and detailed scheme, which depends on adding '*familiaris*' to the name of a wild taxon. He noted that on occasion it would be useful to refer not just to a domestic form as such, but to a particular breed or local form; indeed names were in the past quite commonly given to breeds as if they were species or subspecies, and such names could be added after the '*familiaris*', which in such a case would usually be put in parentheses and shortened to '*fam.*'. Equally, the actual subspecies that gave rise to a particular domesticate might, on occasion, be known; and this too could be represented in the scientific name. So the domestic dog as such would be *Canis lupus* '*familiaris*'; the Torfhund, from the Swiss Neolithic lake dwellings, would be *Canis lupus* (*fam.*) *palustris*; and a domestic dog which one could be certain was derived from the Indian wolf, *C. lupus pallipes*, would be *Canis lupus pallipes* '*familiaris*'. But this is not all: feral forms (domestic stock run wild, to form a wild population) are designated '*exfamiliaris*', and those on the way to becoming domestic (usually from an archaeological context) are '*praefamiliaris*'. Thus we have *Canis lupus* (*exfam.*) *dingo*, and *Canis lupus* (*praefam.*) *canaanensis*. In those cases where the origin of a domesticate is unknown, as with the Arabian Camel (dromedary), the domestic name is retained. The advantage of this system is its consistency. The disadvantages are that, like Bohlken's scheme, it is not in accord with current rules; it is extremely cumbersome; and by making the whole name apparently scientific (italics, lower case) it threatens to create endless synonyms by, for example, spelling a breed name in a latinised way. One envisages long debates about priority between *Canis lupus* (*fam.*) *pastorgermanicus* and *Canis lupus* (*fam.*) *alsatianus*.

Realising that nomenclatural systems were in danger of proliferating, and that the two proposed so far both departed from the rules, I (Groves, 1971) applied to the

Commission for something to be done. Domestic parataxa could, by implication, already be considered outside the sphere of interest of the Code under Article 1a ('Zoological nomenclature is the system of scientific names applied to ... animals known to occur in nature ...'), but preferably this should be made explicit in the Code. There would, under such circumstances, be no *Canis familiaris* or *Bos taurus*; references to domestic forms of a species would be vernacular only, in whatever form an author might choose. The advantage to this scheme is that it recognises that domestic forms are parataxa, not natural taxa such as the Code is designed to deal with, and proposes explicitly to expel them from the Code, which would be left to its proper field of concern. A disadvantage is that many domestic nominal 'species' bearing Linnaean names (see above) are the types of their genera, and elimination of their names would require a wholesale redesignation of type species. When all is said and done, the proposal only cuts the Gordian knot rather than attempting to untie it as Bohlken's and Dennler de La Tour's schemes had at least tried to do.

Corbet & Clutton-Brock (1984) noted that there are times when scientific names, of a sort, would be useful for domesticates, and the names are there and well understood. Yet domesticates are still not conventional taxa (in their words, they are 'derivatives of their wild ancestral species but not parts of them'), so they recommend using their names binominally, as if they were species separate from their wild ancestors, but in quotation marks: *Canis* '*familiaris*', *Bos* '*taurus*'. The advantage of this scheme is that it preserves the well-known names and allows the domesticates to continue to serve as types of genera where necessary, yet allows one to recognise that they do not designate conventional taxa. The disadvantage is that it is not in accord with the Code; indeed, the authors recognise this, and note that many will prefer to use the names without quotation marks in order to conform to the rules of nomenclature.

Solutions for the future?

I am really not sure where we go from here. All four of the solutions proposed so far would really require an alteration to the Code, except for Corbet & Clutton-Brock's second option, whose practitioners would have to accept that they are maintaining a fiction.

We have to remember that it is not just professional zoologists who are involved. Archaeologists and animal breeders, to name just two fields of concern, must use scientific names, and a system inadequate to the task will be counter-productive. Breeds, or breed-groups, of domestic animals are still being described as if they were subspecies (see, for example, Peary, 1990, who coined new trinomina for River and Swamp breed-groups of domestic buffalo). The general public, who tend to have difficulty understanding what species and subspecies are, get inextricably confused. 'Is the dingo a wolf or a dog?' they ask. When I try to explain that this is a non-question, there is an immediate retort: 'But the wolf and the dog are different species; the wolf is *Canis lupus* and the dog is *Canis familiaris*!'.

It is high time that the question be addressed, and that a 'stable and universal' solution be found. Whether this is within the framework of the International Code of Zoological Nomenclature or by *explicit* exclusion from the provisions of the Code must be decided.

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Case 2900

Porites Link, 1807, *Galaxea* Oken, 1815, *Mussa* Oken, 1815 and *Dendrophyllia* Blainville, 1830 (Anthozoa, Scleractinia): proposed conservation

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Abstract. The purpose of this application is to conserve the names of four genera of scleractinian corals: *Porites* Link, 1807, *Galaxea* Oken, 1815, *Mussa* Oken, 1815 and *Dendrophyllia* Blainville, 1830. The names *Galaxea* and *Mussa* are in current use for Indo-Pacific and Caribbean genera respectively but are formally unavailable because vol. 3 (Zoologie) of Oken's (1815–1816) work *Lehrbuch der Naturgeschichte*, in which the names were published, has been rejected for nomenclatural purposes (Opinion 417, September 1956). The name *Porites* Link is in universal use for a widely distributed reef-building coral but is threatened by the senior homonym *Porites* Cuvier, 1798. The names *Galaxea*, *Mussa* and *Dendrophyllia* (a predominantly deep-water non-reef-building genus) are also threatened by *Porites* Cuvier as a senior subjective synonym.

Keywords. Nomenclature; taxonomy; Anthozoa; Scleractinia; corals; reefs; *Dendrophyllia*; *Galaxea* (Indo-Pacific); *Mussa* (Caribbean); *Porites*.

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1. The status of the new names published in vol. 3 (Zoologie) of Oken's (1815–1816) work *Lehrbuch der Naturgeschichte* was first raised by Allen (1902) in relation to mammals. In 1944 an application for a ruling was made by Dr W.H. Osgood (*Chicago Natural History Museum*) although this was not published until 1954 (BZN **9**: 202–203), after Osgood's death. A report (BZN **9**: 193–201) prepared by the then Secretary to the Commission, Francis Hemming, included comments, mainly from mammalogists, and concluded that Oken's work was non-binominal and therefore that new names published in it were not available. The work was rejected for nomenclatural purposes and placed on the Official Index (Opinion 417, September 1956). Later Savage (BZN **18**: 181; 1961) pointed out that Oken's work was largely binominal but that its layout suggested the contrary.

2. Included in Opinion 417 was an invitation to zoologists to submit applications for the conservation of names published in vol. 3 of Oken's work, the rejection of which would lead to instability or confusion. A number of names have since been conserved from the work (see BZN **51**: 339, December 1994, for a list of 10 such names). An application for the conservation of two further names, *Clavella* and *Pennella* (both of Oken, 1815 and both Crustacea, Copepoda), was published in BZN **50**: 273–276 (December 1993).

3. *Galaxea* Oken, 1815 (pp. 71, 72–73) was erected for *Madrepora fascicularis* Linnaeus, 1758 (p. 796) and three other species; Vaughan (1918, p. 98) designated *M. fascicularis* as the type species. Despite the ruling in Opinion 417 the name *Galaxea* is in current usage for a widely distributed, Indo-West Pacific genus of about five species

(see Veron, 1986, p. 364). *Galaxea* is the type genus of the subfamily GALAXEINAE Vaughan & Wells, 1943 (p. 184) of the family OCULINIDAE Gray, 1847 (p. 128).

4. *Mussa* Oken, 1815 (pp. 71, 73) was erected for three species including *Madrepora angulosa* Pallas, 1766 (p. 299); Vaughan (1918, p. 122) designated this as the type species. The name *Mussa* is in use for a Caribbean genus of perhaps two species (see Vaughan & Wells, 1943; p. 195); *Mussa* is the type genus of the family MUSSIDAE Ortmann, 1890 (p. 315).

5. *Dendrophyllia* Blainville, 1830 (p. 319) was created for *Madrepora ramea* Linnaeus, 1758 (p. 797) and six other species; Milne Edwards & Haime (1850, p. liii) designated '*Dendrophyllia*' *ramea* as the type species. *Dendrophyllia* is the universally accepted name for a large genus of non-reef-building (ahermatypic) corals that are abundant in deeper water from tropical to polar latitudes (see Vaughan & Wells, 1943, p. 237). About 25-30 living species and many fossil ones are currently recognized as valid (S.D. Cairns, pers. comm.). It is the type genus of the family DENDROPHYLLIIDAE Gray, 1847 (p. 128) and of the suborder Dendrophylliida Vaughan & Wells, 1943 (p. 233; spelling changed to Dendrophylliina in Wells, 1956, p. F433). Linnaeus (1758) based his description of *Madrepora ramea* on two sources, Petiver ([1711], pl. 76, fig. 7) and Marsigli (= Marsilli, 1725, pl. 30, fig. 136 and pl. 31, fig. 44 [recte 144]). Zibrowius (1980, p. 169) indicated that *ramea* was composite and noted that the colony figured by Marsilli (1725, pl. 31, fig. 144), most probably from the base of a red coral in the south of the western Mediterranean, was to be considered as the type. This amounts to a lectotype designation (Article 74a of the Code). Zibrowius cited Neviani (1934, pp. 363, 373), who studied Marsilli's material housed in the University of Bologna, Italy; among the scleractinian species present Neviani mentioned *Dendrophyllia ramea*, but it was not clear if the material included the colony figured by Marsilli in 1725.

6. *Porites* Link, 1807 (p. 163) is universally accepted as the valid name of the third largest and the most widely distributed living genus of zooxanthellate, reef-building (hermatypic) corals (see Veron & Pichon, 1982 and Veron, 1986). This genus has dominated many reef habitats during the Caenozoic (Vaughan & Wells, 1943; Foster, 1986) and, especially in the Indo-Pacific, it is often the primary frame-builder of modern reefs. It is the type genus for the family PORITIDAE Gray, 1842 (p. 135) and for the widely accepted superfamily Poritoidae Gray, 1842 (first used by Vaughan & Wells, 1943, p. 146; both this and the spelling Poriticae of Wells (1956, p. F390) do not comform with Recommendation 29A of the Code which would give the spelling PORITOIDEA). Veron (1986, p. 216) mentioned 122 nominal species but, in a continuing revision of the genus, I have already found some 275 specific names that have been referred, explicitly or implicitly, to *Porites* Link. At least 50 of these have some degree of acceptance as valid species in recent literature. These include some of the commonest corals of the Atlantic (for example, *P. porites* Pallas, 1766; *P. astreoides* Lamarck, 1816) and the Indo-Pacific (e.g. *P. compressa* Dana, 1846; *P. lobata* Dana, 1846 and *P. solida* Forsskål, 1775).

7. Link (1807) included two nominal species in his new genus *Porites*, *P. polymorphus* Link, with *Madrepora porites* of Gmelin ([1791], p. 3774) and Esper ([1788], *Madrepora* pl. 21) cited as a synonym, and *Madrepora damicornis* of Gmelin ([1791], p. 3775) and Esper ([1794], *Madrepora* pl. 46), i.e. *Millepora damicornis* Linnaeus, 1758. *Madrepora porites* is the type species of *Porites* by absolute

tautonymy (Article 68e). Gmelin cited *Madrepora porites* Pallas, 1766 (p. 324). In his list of synonyms Gmelin cited *Madrepora porites* Pallas, 1766 (p. 324), which is the first publication of the specific name. However, as discussed by Vaughan (1900, p. 314) and Bernard (1905, p. 3) (see also Foster, 1980, p. 75), Pallas's taxon was composite according to modern taxonomy. Pallas cited a reference to 'Seba thes. III tab. 109, fig. 11' among his sources and Vaughan (1900, p. 315) designated the coral from Curaçao figured by Seba ([1759], pl. 109, fig. 11; 'Corallium, poris stellatis ...', p. 202) as the lectotype of *Madrepora porites* Pallas, 1766. The original specimen used for the illustration in Seba's work has not been found.

8. *Porites* Link, 1807 has a senior homonym, *Porites* Cuvier, 1798 (p. 678). Cuvier's taxon was described and three previously described scleractinian species were included: *Madrepora fascicularis* Linnaeus, 1758, *M. ramea* Linnaeus, 1758 and *M. carduus* Ellis & Solander, 1786 (p. 153, pl. 35), a junior synonym of *Madrepora angulosa* Pallas, 1766 (see Zlatarski & Estalella, 1982, p. 165). No type species was ever designated and each of the included species was later assigned to a different genus (all in different suborders from that containing *Porites* Link) and subsequently designated as the type species of its genus (see paras. 3, 4 and 5 above).

9. Although no species are currently assigned to *Porites* Cuvier, 1798, it remains an available name. Its existence threatens the nomenclatural stability of its junior homonym *Porites* Link, 1807, and of associated names at higher taxonomic levels. The name *Porites* Guettard, 1770 (p. 358), used for some fossil sponges (?), can be ignored since it appeared in a non-binominal work; the name *Porites* 'Lamarck' was used by Lonsdale (1839, p. 686) for some Paleozoic corals (Anthozoa, Tabulata) that were later redescribed as *Heliolites* Dana, 1846 (p. 541).

10. The existence of *Porites* Cuvier, 1798 also threatens the nomenclatural stability of *Galaxea* Oken, 1815, *Mussa* Oken, 1815 and *Dendrophyllia* Blainville, 1830. None of Link (1807), Oken (1815) and Blainville (1830) mentioned *Porites* Cuvier, and all three referred to the previously described species under the older generic name *Madrepora* Linnaeus (1758, p. 793). Apparently they were unaware of Cuvier's (1798) work. I am also not aware of any subsequent author who has ever mentioned *Porites* Cuvier in synonymies of *Galaxea*, *Mussa* or *Dendrophyllia*.

11. I am aware of only one author who has ever referred any species to *Porites* Cuvier since 1798. That was Dana (1846, p. 550) who used the heading '*Porites* — Cuvier' when he described 19 new species and varieties and eight existing species. However, this was clearly an error by Dana for three reasons: (1) Dana included all three of Cuvier's species under other genera without mentioning that Cuvier had referred them to *Porites*; (2) it is clear from the text that Dana was using Link's concept of *Porites* throughout and not that of Cuvier; and (3) the descriptions in Dana (1846) restricted a broader usage of *Porites* by Lamarck (1816, p. 267) back to Link's much narrower concept. Dana (1846) forms the foundation for the modern understanding of *Porites* Link, 1807. Despite this, most nineteenth century authors referred *Porites* to Lamarck (1816) or to later writers; Vaughan (1900, p. 195) seems to be both the earliest direct citation of *Porites* Link and the basis for the almost universal use of *Porites* Link throughout the twentieth century.

12. While no previous author seems to have been aware that *Porites* Cuvier is a senior synonym of the names *Galaxea*, *Mussa* and *Dendrophyllia*, its homonymy with *Porites* Link was indicated briefly by Lang, Smith & Thomas (1940, p. 103) and

Vaughan & Wells (1943, p. 152). Veron & Pichon (1982, p. 141) addressed the issue directly in an addendum that concluded: 'We can find no citation of *Porites* Cuvier, 1798 in any subsequent literature and therefore consider that *Porites* Cuvier, 1798 is a nomen oblitum'. Later comments by Foster (1986, p. 75) and Zlatarski (1990, p. 257) are based on Veron & Pichon (1982) and demonstrate an awareness of the disruptive potential of *Porites* Cuvier. Zlatarski commented: 'A proposal to suppress *Porites* Cuvier, 1798 is necessary in order to validate the priority of Link's authorship'; an application to the Commission has so far not been made.

13. The names *Galaxea* and *Mussa* have remained in use, attributed to Oken (1815), both before and after the publication of Opinion 417 in 1956. They have been used extensively in the literature, both taxonomic and ecological, and I propose that they be conserved. Suppression of *Porites* Cuvier, 1798 will allow the continued stable usage of these names, together with those of *Porites* Link, 1807 and *Dendrophyllia* Blainville, 1830. In addition to the publications already cited in this application the names have appeared in recent works by Zlatarski & Estalella (1982; *Mussa*), Scheer & Pillai (1983; *Galaxea* and *Porites* Link) and Scheer (1991; *Dendrophyllia*). All four names are included in Chevalier (1987). A representative list of a further 12 publications which include one or more of the generic names is held by the Commission Secretariat.

14. A draft of this application was reviewed by the following coral taxonomists: Drs F.M. Bayer (*Smithsonian Institution*), A.F. Budd (*University of Iowa*), S.D. Cairns (*Smithsonian Institution*), C.C. Wallace (*Museum of Tropical Queensland*) and J.E.N. Veron (*Australian Institute of Marine Science*). These specialists all agreed with the intent of the proposals.

15. The International Commission on Zoological Nomenclature is acordingly asked:

(1) to use its plenary powers:
  (a) to rule that the following generic names are available despite having been published in a rejected work;
    (i) *Galaxea* Oken, 1815;
    (ii) *Mussa* Oken, 1815;
  (b) to suppress the generic name *Porites* Cuvier, 1798, and all uses of the name *Porites* prior to the publication of *Porites* Link, 1807 for the purposes of both the Principle of Priority and the Principle of Homonymy;

(2) to place the following names on the Official List of Generic Names in Zoology:
  (a) *Galaxea* Oken, 1815 (gender: feminine), type species by subsequent designation by Vaughan (1918) *Madrepora fascicularis* Linnaeus, 1758;
  (b) *Mussa* Oken, 1815 (gender: feminine), type species by subsequent designation by Vaughan (1918) *Madrepora angulosa* Pallas, 1766;
  (c) *Porites* Link, 1807 (gender: masculine), type species by absolute tautonymy *Madrepora porites* Pallas, 1766;
  (d) *Dendrophyllia* Blainville, 1830 (gender: feminine), type species by subsequent designation by Milne Edwards & Haime (1850) *Madrepora ramea* Linnaeus, 1758;

(3) to place the following names on the Official List of Specific Names in Zoology:
  (a) *fascicularis* Linnaeus, 1758, as published in the binomen *Madrepora fascicularis* (specific name of the type species of *Galaxea* Oken, 1815);

(b) *angulosa* Pallas, 1766, as published in the binomen *Madrepora angulosa* (specific name of the type species of *Mussa* Oken, 1815);

(c) *porites* Pallas, 1766, as published in the binomen *Madrepora porites* (specific name of the type species of *Porites* Link, 1807) and as defined by the lectotype designated by Vaughan (1901);

(d) *ramea* Linnaeus, 1758, as published in the binomen *Madrepora ramea* (specific name of the type species of *Dendrophyllia* Blainville, 1830) and as defined by the lectotype designated by Zibrowius (1980);

(4) to place the following names on the Official List of Family-Group Names in Zoology:

(a) GALAXEINAE Vaughan & Wells, 1943 (type genus *Galaxea* Oken, 1815);

(b) MUSSIDAE Ortmann, 1890 (type genus *Mussa* Oken, 1815);

(c) PORITIDAE Gray, 1842 (type genus *Porites* Link, 1807);

(d) DENDROPHYLLIIDAE Gray, 1847 (type genus *Dendrophyllia* Blainville, 1830);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Porites* Cuvier, 1798, as suppressed in (1)(b) above.

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Case 2903

Tropidoptera Ancey, 1889 (Mollusca, Gastropoda): proposed designation of *Endodonta wesleyi* Sykes, 1896 as the type species

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Abstract. The purpose of this application is to conserve the original concept and subsequent understanding of the name *Tropidoptera* Ancey, 1889 for a genus of terrestrial gastropods belonging to the endemic Hawaiian family AMASTRIDAE. The nominal species *Helix alata* Pfeiffer, 1856 was fixed as the type, but this was based on a misidentification and it is proposed that the taxon actually involved be designated as type species; this is *Endodonta* (*Pterodiscus*) *wesleyi* Sykes, 1896.

Keywords. Nomenclature; taxonomy; Gastropoda; *Tropidoptera*; *Pterodiscus*; Hawaii.

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1. Ancey (1889, p. 191) established the genus *Tropidoptera* for the single nominal species *Helix alata* Pfeiffer, 1856 (p. 33), which is thus the type species by monotypy. Pilsbry (1893, p. 36) introduced the new name *Pterodiscus* as a replacement for *Tropidoptera* Ancey, 1889, incorrectly considering *Tropidoptera* to be preoccupied by *Tropidopterus* Agassiz, 1846 (p. 167) in the Coleoptera. Pilsbry mentioned that *Helix alata* Pfeiffer was the type species and illustrated (pl. 4, fig. 44) what he supposed to be *H. alata*.

2. *Tropidoptera* Ancey, 1889 belongs to the endemic Hawaiian Island family AMASTRIDAE. Pilsbry (1893, p. 36) treated it (under the replacement name *Pterodiscus*) as a section of *Charopa* Martens, 1860, the latter at that time a subgenus of *Endodonta* Albers, 1850 (ENDODONTIDAE). Sykes (1896, p. 127) treated *Pterodiscus* as a subgenus of *Endodonta*, but later (1900, p. 292) regarded it as an independent genus in the ENDODONTIDAE. Pilsbry & Vanatta (1905, p. 572) transferred *Pterodiscus* to the ACHATINELLIDAE, close to their new 'section' *Helicamastra* Pilsbry & Vanatta, 1905 (p. 570) of the genus *Amastra* Adams & Adams, 1855. The type species of *Helicamastra* is *Amastra* (*Helicamastra*) *discus* Pilsbry & Vanatta, 1905 (p. 571).

3. Sykes (1896, p. 127), having examined the type specimen of *Helix alata* Pfeiffer (see Hyatt & Pilsbry, 1911, p. 121), pointed out that the '*Helix alata*' of both Ancey (1889) and Pilsbry (1893) did not match *Helix alata* Pfeiffer. Sykes therefore proposed the new name *Endodonta* (*Pterodiscus*) *wesleyi* for the specimens identified as *Helix alata* by Ancey and by Pilsbry.

4. As mentioned in para. 2 above, Pilsbry & Vanatta (1905, p. 572) treated *Pterodiscus* as a genus; accepting Sykes's view that Ancey (1889) and Pilsbry (1893) had misidentified *H. alata*, they (p. 571) placed *H. alata* Pfeiffer in *Helicamastra* and (p. 572) said, although invalidly, that *P. wesleyi* (Sykes) was the type species of *Pterodiscus*. Hyatt & Pilsbry (1911, p. 120) synonymised *Pterodiscus* and *Helicamastra*, thereby bringing both *alata* and *wesleyi* into *Pterodiscus* Pilsbry (i.e. *Tropidoptera* Ancey).

5. As outlined above, the original designation of *Helix alata* Pfeiffer as the type species of *Tropidoptera* (and hence of *Pterodiscus*) was based on a misidentification that has been explicitly recognised by subsequent workers (Sykes, 1896, p. 127 and 1900, p. 292; Pilsbry & Vanatta, 1905, p. 572; Hyatt & Pilsbry, 1911, p. 120; Cowie, Evenhuis & Christensen, 1995, p. 117). Under Article 70b of the Code the case is therefore referred to the Commission.

6. The original concept of *Tropidoptera* by Ancey (1889) and of *Pterodiscus* by Pilsbry (1893) was based on the taxon subsequently called *Endodonta* (*Pterodiscus*) *wesleyi* Sykes, 1896 (para. 3 above), and this was recognised as the type species by Hyatt & Pilsbry (1911, p. 119). Its formal designation as such would safeguard the concepts of both *Tropidoptera* and *Helicamastra* should they be separated in the future.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Tropidoptera* Ancey, 1889 and to designate *Endodonta* (*Pterodiscus*) *wesleyi* Sykes, 1896 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Tropidoptera* Ancey, 1889 (gender: feminine), type species *Endodonta* (*Pterodiscus*) *wesleyi* Sykes, 1896 by the designation in (1) above;

(3) to place on the Official List of Specific Names in Zoology the name *wesleyi* Sykes, 1896, as published in the binomen *Endodonta* (*Pterodiscus*) *wesleyi* (specific name of the type species of *Tropidoptera* Ancey, 1889);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Pterodiscus* Pilsbry, 1893, a junior objective synonym of *Tropidoptera* Ancey, 1889.

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Case 2946

PLUTONIINAE Bollman, 1893 (Arthropoda, Chilopoda) and PLUTONIINAE Cockerell, 1893 (Mollusca, Gastropoda): proposed removal of homonymy

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Abstract. This application proposes removal of the homonymy between the family-group names PLUTONIINAE Bollman, 1893 (centipedes) and PLUTONIINAE Cockerell, 1893 (slugs), which are respectively derived from the generic names *Plutonium* Cavanna, 1881 and *Plutonia* Morelet in Stabile, 1864. As the centipede name PLUTONIINAE Bollman is the senior homonym, it is proposed that the entire generic name *Plutonia* be used as the stem to form the gastropod subfamily name PLUTONIAINAE Cockerell.

Keywords. Nomenclature; taxonomy; Chilopoda; Gastropoda; PLUTONIINAE; PLUTONIAINAE.

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1. The name PLUTONIINAE, published posthumously by Bollman (1893, pp. 165, 168) for a subfamily of the centipede family SCOLOPENDRIDAE Leach, 1815, derives from *Plutonium* Cavanna, 1881 (p. 169). The type species of *Plutonium* is by monotypy *P. zwierleini* Cavanna, 1881 (p. 169) from Sicily. The gastropod name PLUTONIINAE Cockerell, 1893 (p. 186) is based on *Plutonia* Morelet (published in Stabile, 1864, p. 121). The type species of *Plutonia* is by monotypy *Viquesnelia atlantica* Morelet, 1860 (p. 139, pl. 1) from the Azores. According to Article 55b of the Code such cases of family-group name homonymy are to be referred to the Commission for resolution.

2. Cockerell introduced the name PLUTONIINAE in the second part of his checklist of slugs, dated 21 December 1893. Bollman's work is a collection of all his printed papers plus unpublished manuscripts discovered after his death, and is dated simply 1893. A prefacing 'Advertisement' by S.P. Langley, then Secretary of the Smithsonian Institution, is dated 31 August 1893. A review of Bollman's work (Anonymous, 1894, p. 271) mentioned that it and two other U.S. National Museum Bulletins were published in 'October and November 1893.' This review was probably written by the journal's editors, one of whom was C.V. Riley, then Honorary Curator of Insects at the U.S. National Museum. Because of his position at the Museum and his authorship of an 'Introductory Note' to Bollman's work, Riley would have known when it was published, so the time span of October-November 1893 is

probably accurate. In accordance with standard practice, Jeekel (1971, endnote 18, p. 378) gave November 1893 as the publication date; in compliance with Article 21c(i) of the Code the date is deemed to be 30 November 1893. PLUTONIINAE Bollman there- fore antedates PLUTONIINAE Cockerell by 21 days.

3. Because he believed that the mollusc generic name *Plutonia* Morelet in Stabile, 1864 might be preoccupied by the trilobite name *Plutonia* Hicks, which was in fact published in 1871 (p. 399), Collinge (1893, p. 201, footnote 13 in Cockerell's paper) suggested the replacement names *Vitriplutonia* and VITRIPLUTONIINAE 'if any change is necessary'. These names are junior objective synonyms and were published subject to a condition which is not met; they have never been adopted.

4. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that for the purposes of Article 29 of the Code the stem of the generic name *Plutonia* Morelet in Stabile, 1864 is PLUTONIA-;

(2) to place the following names on the Official List of Generic Names in Zoology:
   (a) *Plutonia* Morelet in Stabile, 1864 (gender: feminine), type species by monotypy *Viquesnelia atlantica* Morelet, 1860;
   (b) *Plutonium* Cavanna, 1881 (gender: neuter), type species by monotypy *Plutonium zwierleini* Cavanna, 1881;

(3) to place the following names on the Official List of Specific Names in Zoology:
   (a) *atlantica* Morelet, 1860, as published in the binomen *Viquesnelia atlantica* (specific name of the type species of *Plutonia* Morelet in Stabile, 1864);
   (b) *zwierleini* Cavanna, 1881, as published in the binomen *Plutonium zwierleini* (specific name of the type species of *Plutonium* Cavanna, 1881);

(4) to place the following names on the Official List of Family-Group Names in Zoology:
   (a) PLUTONIAINAE Cockerell, 1893, type genus *Plutonia* Morelet in Stabile, 1864 (spelling emended by the ruling in (1) above) (Mollusca, Gastropoda);
   (b) PLUTONIINAE Bollman, 1893, type genus *Plutonium* Cavanna, 1881 (Arthropoda, Chilopoda);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Plutonia* Hicks, 1871 (a junior homonym of *Plutonia* Morelet in Stabile, 1864);

(6) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name PLUTONIINAE Cockerell, 1893 (spelling emended to PLUTONIAINAE by the ruling in (1) above).

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The first author thanks A.A. Schileyko for bringing this nomenclatural conflict to his attention, and A. Minelli, R.L. Hoffman, H. Enghoff, K. Emberton and G. Rosenberg for their help. R. Hershler provided information about the mollusc names.

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Case 2910

Cubaris murina Brandt, 1833 (Crustacea, Isopoda): proposed conservation of both the generic and specific names

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Abstract. The purpose of this application is to conserve the generic and specific names of the pantropical conglobating isopod *Cubaris murina* Brandt, 1833. The generic name is threatened by the senior homonym *Cubaris* Billberg, 1820, whilst the specific name is threatened by the senior subjective synonym *Armadillo galbineus* Eschscholtz, 1823. *Cubaris* Billberg is a junior objective synonym of *Asellus* Geoffroy, 1762, which was conserved in Opinion 1754 (March 1994). Both *Cubaris* Billberg and *A. galbineus* have remained unused and their suppression is proposed. It is also proposed that the unused specific name of *Cubaris brunnea* Brandt, 1833 be suppressed.

Keywords. Nomenclature; taxonomy; Isopoda; *Cubaris*; *Cubaris marina*.

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1. The name *Asellus* Geoffroy, 1762 (p. 671) was conserved in Opinion 1754 (BZN **51**: 58–70; March 1994) with *Oniscus aquaticus* Linnaeus, 1758 (p. 637) as the type species by subsequent monotypy by Fourcroy (1785, p. 541). *O. aquaticus* refers to the water slater found in fresh water throughout Europe; it was the only taxonomic species included in the genus by Geoffroy (1762).

2. Billberg (1820, p. 137) proposed the generic name *Cubaris*. Billberg's work was published as a catalogue which was considered by some of his contemporaries as only the privately printed listing of a private collection. However, Walsingham & Durrant (1902, p. 163) noted: 'From general appearance the book would appear to have been properly published, and has been accepted as published by those who have dealt with it'. There was no description of the genus but *Cubaris* was based on three synonymies: *Asellus* 'Ltr.' (Latreille, 1803, i.e. Geoffroy, 1762), *Idotea* 'Fbr.' (i.e. Fabricius, 1796) and *Entomon* 'Kln.' (= Klein?). Billberg used the abbreviation 'Eg.' (= Ego) to mean 'Auctor hujus operis' and it seems that he gave a new name to each of the many groups of genera he synonymized. Hummel (1825, p. 3) commented that Billberg 'a fait tout son possible pour augmenter la confusion dans la synonymie des genres, en créant de nouvelles dénominations absurdes' and referred to 'innovations mal fondées et passablement ridicules'. Walsingham & Durrant analyzed the work and agreed with Hummel; they commented (1902, p. 170): 'We have been unable to discover a single genus which can be accepted as valid'. In his *Index Animalium*, Sherborn (1922, p. xxiv) noted: 'I agree with Walsingham & Durrant ... as to this

[Billberg's] book' and (1925, p. 1669) listed *Cubaris* as a nomen dubium. Nevertheless *Cubaris* is an available name (Article 12b(1) and 12b(5) of the Code). *Oniscus aquaticus* Linnaeus, 1758 was the only included species in the genus and is therefore the type species by monotypy. *Cubaris* Billberg is thus a junior objective synonym of *Asellus* Geoffroy, 1762 (see para. 1 above). The latter name has always been used for the genus including *O. aquaticus* and Billberg's name has been compietely forgotten. Billberg's library and his first collection, which were listed in the *Enumeratio*, were destroyed by fire in 1822 and thus none of this original material survives (see Walsingham & Durrant, 1902, p. 164).

3. Brandt (1833, p. 189) proposed the name *Cubaris* for a genus of several new, uniformly coloured, conglobating terrestrial isopods, including (p. 190) *C. cinerea*, *C. murina*, *C. brunnea* and *C. limbata*. Budde-Lund (1885, p. 28; see also 1904, p. 120) synonymized *murina* and *brunnea* and noted that *cinerea* was probably also synonymous; he adopted *murina* as the valid name. In 1909 Budde-Lund (p. 54) designated *murina* as the type species of *Cubaris*, which he treated as a subgenus of *Armadillo* Latreille, 1802. The name *Cubaris* has been very widely used at generic rank and, to our knowledge, no author has ever mentioned that it is a junior homonym. Furthermore, in our revisional work on the genus we have not so far found a valid synonym for *Cubaris* Brandt. To maintain the stability of usage of the latter name we propose that *Cubaris* Billberg be suppressed.

4. Brandt (1833, p. 189) proposed the family-group name 'Cubaridea' to include *Cubaris* and *Armadillo*. *Cubaris* and a large number of tropical genera related to it are not close to *Armadillo* and the name CUBARIDAE is now widely used at family level for the largest group of conglobating isopods, found world-wide.

5. Eschscholtz (1823, p. 112) described *Armadillo galbineus* from Guam. No type material is known to exist. The description is poor but most probably refers to a rather large, dull coloured conglobating species. Budde-Lund (1885, p. 39) listed *A. galbineus* as a nomen dubium; in 1904 (p. 120) he noted that *galbineus* was probably a synonym of *C. murina*, although there are a few other species of CUBARIDAE (ARMADILLIDAE auctt.) which would fit the description given for *galbineus*. *Cubaris murina* is pantropical; it is common in the Pacific islands, including Guam. We propose that stability in the nomenclature should be maintained by suppressing *A. galbineus*. The names *Cubaris* and *murina* have been consistently used in the literature (recent publications include those by Vandel, 1973; Ferrara & Taiti, 1979; Schmalfuss, 1983; Green, Ferrara & Taiti, 1990; and Taiti, Ferrara & Kwon, 1992).

6. The synonymy of *Cubaris brunnea* Brandt, 1833 from Demerary (i.e. Georgetown, Guyana) with *C. murina* Brandt, 1833 (see para. 3 above) is highly uncertain and *C. brunnea* remains a nomen dubium. As such it is a threat to the name of any non-specialized conglobating isopod from the northern parts of South America. Since the work of Budde-Lund (1909) it has not been listed as a valid name and we propose that *brunnea* be suppressed.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following names:

(a) the generic name *Cubaris* Billberg, 1820, and all uses of the name *Cubaris* prior to the publication of *Cubaris* Brandt, 1833, for the purposes of both the Principle of Priority and the Principle of Homonymy;

(b) the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
(i) *galbineus* Eschscholtz, 1823, as published in the binomen *Armadillo galbineus*;
(ii) *brunnea* Brandt, 1833, as published in the binomen *Cubaris brunnea*;

(2) to place on the Official List of Generic Names in Zoology the name *Cubaris* Brandt, 1833 (gender: feminine), type species by subsequent designation by Budde-Lund (1909) *Cubaris murina* Brandt, 1833;

(3) to place on the Official List of Specific Names in Zoology the name *murina* Brandt, 1833, as published in the binomen *Cubaris murina* (specific name of the type species of *Cubaris* Brandt, 1833);

(4) to place on the Official List of Family-Group Names in Zoology the name CUBARIDAE Brandt, 1833 (type genus *Cubaris* Brandt, 1833);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Cubaris* Billberg, 1820, as suppressed in (1)(a) above;

(6) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
(a) *galbineus* Eschscholtz, 1823, as published in the binomen *Armadillo galbineus* and as suppressed in (1)(b)(i) above;
(b) *brunnea* Brandt, 1833, as published in the binomen *Cubaris brunnea* and as suppressed in (1)(b)(ii) above.

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Case 2884

Xerammobates Popov, 1951 (Insecta, Hymenoptera): proposed designation of *Ammobates* (*Xerammobates*) *oxianus* Popov, 1951 as the type species

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Abstract. The purpose of this application is to conserve the current (and original) understanding of the name *Xerammobates* Popov, 1951 for a subgenus of ammobatine parasitic bees. The synonym *Micropasites* Warncke, 1983 is a junior homonym. The present type species of *Xerammobates*, i.e. *Ammobates biastoides* Friese, 1895, belongs to *Ammobates* sensu stricto and was misidentified by Popov. It is proposed that *Ammobates* (*Xerammobates*) *oxianus* Popov, 1951 be designated as the type species.

Keywords. Nomenclature; taxonomy; Hymenoptera; parasitic bees; *Xerammobates*; *Ammobates*.

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1. Popov (1951, p. 904) proposed the name *Xerammobates* for a subgenus of *Ammobates* Latreille, 1809 (p. 169) containing *A. biastoides* Friese, 1895 (p. 131) and the two new species *A.* (*X.*) *oxianus* and *A.* (*X.*) *lebedevi*. He designated *A. biastoides* as the type species. Unfortunately, however, *A. biastoides* does not belong to *Xerammobates* as described and figured by Popov (pp. 904–905, 917–920, figs. 3, 5–7) but is a species of *Ammobates* sensu stricto. It must be assumed that the characters given for *A. biastoides* in Popov's key to *Ammobates* females (p. 908) were drawn from some misidentified Algerian ammobatine; the male of *A. biastoides* was not known to him (see his footnote to p. 908 and asterisk against name on p. 913 in key to males).

2. Warncke (1983, p. 283) proposed the subgeneric name *Micropasites* for three ammobatine species which included Popov's *A.* (*X.*) *oxianus* and *A.* (*X.*) *lebedevi*. Warncke did not adopt *Xerammobates* because he correctly considered that its type species *A. biastoides* did not belong to the same subgenus as the other species. To avoid secondary homonymy Warncke provided the replacement specific name *tunensis* for the third *Micropasites* species, *Ammobates* (*Xerammobates*) *minutissimus* Mavromoustakis, 1959 (p. 52), since he erroneously considered *Morgania minutissima* Cockerell, 1933 (p. 379) to belong to *Ammobates*. Warncke designated *A. tunensis* (i.e. *A.* (*X.*) *minutissimus*) as the type species of his subgenus *Micropasites*. Warncke's name *Micropasites* is invalid because it is preoccupied by *Micropasites* Linsley, 1942 (p. 130); the latter was proposed as a subgeneric name in *Gnathopasites* Linsley & Michener, 1939 (p. 272) and is currently accepted as a subgenus of *Neopasites* Ashmead, 1898 (p. 284).

3. It is proposed that the name *Xerammobates* should be validated in the sense intended by Popov (1951), i.e. as a subgeneric name for the group including the two

species known to and described by him (viz. *Ammobates oxianus* and *A. lebedevi*), by setting aside his designation of *A. biastoides* Friese, 1895 as type species and by designating *A. oxianus* Popov, 1951 (p. 917) in its place. *A. oxianus* is to be preferred to *A. lebedevi* (p. 919) as type species since it was described and figured by Popov in both sexes and he provided figures of the concealed sterna and genitalia of the male; *A. lebedevi* was known to him only from a single female. The holotype of *A.* (*X.*) *oxianus* is in the Zoological Museum in St. Petersburg.

4. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal subgenus *Xerammobates* Popov, 1951 and to designate *Ammobates* (*Xerammobates*) *oxianus* Popov, 1951 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Xerammobates* Popov, 1951 (gender: masculine), type species by designation in (1) above *Ammobates* (*Xerammobates*) *oxianus* Popov, 1951;

(3) to place on the Official List of Specific Names in Zoology the name *oxianus* Popov, 1951, as published in the binomen *Ammobates* (*Xerammobates*) *oxianus* (specific name of the type species of *Xerammobates* Popov, 1951);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Micropasites* Warncke, 1983 (a junior homonym of *Micropasites* Linsley, 1942).

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Case 2945

Melissodes desponsa Smith, 1854 and *M. agilis* Cresson, 1878 (Insecta, Hymenoptera): proposed conservation of the specific names

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Abstract. The purpose of this application is to conserve the specific names of *Melissodes desponsa* Smith, 1854 and *M. agilis* Cresson, 1878 which are in universal usage for two of the most common North American species of long-tongued, solitary bees (family APIDAE). The names are threatened by the virtually unused senior subjective synonyms *Macrocera americana*, *M. pensylvanica* and *M. philadelphica*, all of Lepeletier (1841).

Keywords. Nomenclature; taxonomy; Hymenoptera; solitary bees; *Melissodes*; North America.

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1. Lepeletier (1841) described many species of solitary bees, some of which were collected by other workers. Most of these taxa have been recognized and commented on in the literature by subsequent authors, but three nominal species described in the genus *Macrocera* have remained unrecognized because type material was unknown and because of the lack of subsequent and more detailed descriptions.

2. *Macrocera americana* Lepeletier, 1841 (p. 92) was described from Carolina, U.S.A. with a type in the 'Musée de France'; *M. pensylvanica* and *M. philadelphica*, both of Lepeletier (1841, pp. 97 and 110), were described from Pennsylvania with types in the 'Musée de M le général Dejean'. All the types were given as male.

3. Lepeletier's names have rarely appeared in the literature. All three species were mentioned by Smith (1854) in his *Catalogue of hymenopterous insects in the collections of the British Museum*. *Macrocera americana* was noted in conjunction with the description (p. 310) of his new species *Melissodes desponsa*, based on a female specimen from Ohio in the collections of the Natural History Museum in London. Smith (p. 312) identified a specimen collected by himself in Carolina as *M. americana* and stated that *desponsa* was probably the female of *americana*. *Macrocera philadelphica* and *M. pensylvanica* were mentioned (p. 312) only with a reference to Lepeletier's original publication. All three Lepeletier names were listed as valid in Dalla Torre's (1896) catalogue, while that by Muesebeck, Krombein & Townes (1951) included only *americana* and *pensylvanica*. The later edition of the latter (Krombein, Hurd, Smith & Burks, 1979, p. 2156), however, listed all three names under 'Unrecognized species of the genus *Melissodes* Latreille' in which the 'Types are either lost or destroyed'. Hendrickson (1930, p. 164) used the name '*Melissodes pennsylvanica* Lep.'; however, I (LaBerge, 1961) noted that this use resulted from a misidentification (Hendrickson was a Ph.D. student and the specimens were probably named by Grace Sandhouse of the Smithsonian Museum, who is mentioned in the

acknowledgements of the paper). Cresson (1872, p. 280) identified four specimens from Texas as *Melissodes pennsylvanica* [sic] without comment. These appear to be the only occasions on which Lepeletier's names have been used since their publication.

4. In my revision of the bees of the genus *Melissodes* I (LaBerge, 1961, p. 654) listed the (1841) Lepeletier names as nomina dubia because type material was unknown and the taxa to which the names applied could not be identified from the original descriptions which were too brief and without sufficient detail or figures.

5. What appear to be part of the type series (two males each) of *Macrocera americana* and *M. philadelphica*, and a single male which is probably the holotype of *M. pensylvanica*, were discovered by Mr D.B. Baker in the Dejean-Lepeletier-Latreille collection in the Hope Entomological Collection of Oxford University. The male specimen of *M. pensylvanica* was labeled by Mr Baker as the holotype and all the specimens were sent to me for study. All Lepeletier's material was in rather poor condition and I selected lectotypes for *philadelphica* and *americana* from the least damaged and most recognizable specimens. I concluded (LaBerge, 1994) that the lectotype of *M. americana* was a specimen of the species now called *Melissodes desponsa* Smith, 1845. The specific name *americana* is thus a senior subjective synonym of *desponsa*, as suggested previously by Smith himself (para. 3 above). I also concluded that both *philadelphica* and *pensylvanica* were senior subjective synonyms of *Melissodes agilis* Cresson, 1878 (p. 204), which was founded on six specimens from Texas in the Belfrage collection in the collections of the American Entomological Society, Academy of Natural Sciences, Philadephia.

6. The species *Melissodes desponsa* has been known under that name since Smith's (1854) original publication. I (LaBerge, 1956, p. 562) listed more than 20 primary references to it under that name or junior synonyms. This is a very common North American species for which a great deal of literature exists concerning distribution, nesting and pollination biology. *M. agilis* is the most common North American species of the genus *Melissodes*. I (LaBerge, 1961, p. 382) listed over 50 primary references to the species, which has been known under the name since Cresson's (1878) original publication. Some of the more important works, in which one or both of the names *desponsa* and *agilis* have appeared, are Cockerell (1906, pp. 76, 80, 83), LaBerge (1956, p. 562), LaBerge (1961, p. 654), Mitchell (1962, pp. 274, 282), Krombein, Hurd, Smith & Burks (1979, pp. 2143, 2144), Hurd, LaBerge & Linsley (1980, p. 105), Parker, Tepedino & Bohart (1981, pp. 43–52) and Roig-Alsina & Michener (1993, p. 127). Adoption of Lepeletier's (1841) names in place of the junior synonyms, which have been used consistently, would disturb stability and lead to unnecessary confusion in the literature.

7. This application has been read and is supported by Drs Loren Nevling, Lawrence M. Page and David Voegtlin (*Illinois Natural History Survey*) and by Prof Charles D. Michener (*University of Kansas*).

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *americana* Lepeletier, 1841, as published in the binomen *Macrocera americana*;

(b) *pensylvanica* Lepeletier, 1841, as published in the binomen *Macrocera pensylvanica*;

(c) *philadelphica* Lepeletier, 1841, as published in the binomen *Macrocera philadelphica*;

(2) to place on the Official List of Specific Names in Zoology the following names:

(a) *desponsa* Smith, 1854, as published in the binomen *Melissodes desponsa*;

(b) *agilis* Cresson, 1878, as published in the binomen *Melissodes agilis*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:

(a) *americana* Lepeletier, 1841, as published in the binomen *Macrocera americana* and as suppressed in (1)(a) above;

(b) *pensylvanica* Lepeletier, 1841, as published in the binomen *Macrocera pensylvanica* and as suppressed in (1)(b) above;

(c) *philadelphica* Lepeletier, 1841, as published in the binomen *Macrocera philadelphica* and as suppressed in (1)(c) above.

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Case 2810

Rhabdomeson Young & Young, 1874 (Bryozoa): proposed designation of *Rhabdomeson progracile* Wyse Jackson & Bancroft, 1995 as the type species

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Abstract. The purpose of this application is to conserve the current understanding of the name *Rhabdomeson* Young & Young, 1874 which is in established usage for a genus of Carboniferous bryozoans. Young & Young misidentified as *Millepora gracilis* Phillips, 1841 the single species that they included in the genus. We (1995) have named the taxon *Rhabdomeson progracile* and propose that this be designated as the type species.

Keywords. Nomenclature; taxonomy; Bryozoa; Carboniferous; *Rhabdomeson*.

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1. Phillips (1841) described a number of zoophytes (accepted now as bryozoans) from the Devonian of south-west England. He established a new nominal species *Millepora gracilis* (p. 20, pl. 11, fig. 31). The original specimens appear to be lost.

2. M'Coy (1844, p. 195) identified material from the Carboniferous of Ireland as *Millepora gracilis* Phillips.

3. Young & Young (1874, p. 337) established the genus *Rhabdomeson* for small erect cylindrical bryozoans with hollow axial cylinders from which autozooecia are budded. Their genus was based on specimens collected from strata of Carboniferous age at various localities in the Midland Valley of Scotland. They possessed specimens of *Millepora gracilis* sensu M'Coy, 1844, and considered their Scottish specimens to be conspecific with M'Coy's Irish forms. Based on this identification, Young & Young (p. 337) included in *Rhabdomeson* only the nominal species *R. gracile*, so that *Millepora gracilis* Phillips is the type species by monotypy (see Blake, 1983, p. 569). Young & Young had some doubts as to whether their identification of Phillips's species was correct.

4. Whidborne (1898) redescribed bryozoans from the Devonian of south-west England and expressed the view (p. 193) that *Millepora gracilis* Phillips was not conspecific with the species that both M'Coy and Young & Young had identified as *M. gracilis*.

5. We have recently examined material in the Whidborne Collection in the Sedgwick Museum, Cambridge, and have confirmed that the Devonian and Carboniferous taxa are not conspecific (Wyse Jackson & Bancroft, 1995, p. 28). *Millepora gracilis* sensu M'Coy and *Rhabdomeson gracile* sensu Young & Young represent a

Carboniferous bryozoan undescribed until our recent paper in which we called it *Rhabdomeson progracile* (1995, p. 30). The holotype is specimen TCD.37000 (Trinity College, Dublin) from Hurst, North Yorkshire, England.

6. Since Young & Young misidentified the type species of *Rhabdomeson* it is necessary under Article 70b of the Code to refer the case to the Commission and we propose that *Rhabdomeson progracile* be designated as the type species.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Rhabdomeson* Young & Young, 1874 and to designate *Rhabdomeson progracile* Wyse Jackson & Bancroft, 1995 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Rhabdomeson* Young & Young, 1874 (gender: neuter), type species by designation in (1) above *Rhabdomeson progracile* Wyse Jackson & Bancroft, 1995;

(3) to place on the Official List of Specific Names in Zoology the name *progracile* Wyse Jackson & Bancroft, 1995, as published in the binomen *Rhabdomeson progracile*.

Acknowledgements

We are grateful to the late Mr D. Price (Sedgwick Museum, Cambridge) for the loan of specimens from the Whidborne and Porter Collections.

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Case 2951

Nectria Gray, 1840 (Echinodermata, Asteroidea): proposed designation of *Nectria ocellata* Perrier, 1875 as the type species

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Abstract. The purpose of this application is to designate *Nectria ocellata* Perrier, 1875 as the type species of the southern Australian starfish genus *Nectria* Gray, 1840. The specimens on which this genus was based are of *N. ocellata* but were misidentified as *Asterias ocellifera* Lamarck, 1816 by Gray.

Keywords. Nomenclature; taxonomy; Echinodermata; Asteroidea; starfish; *Nectria*; Australia.

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1. The starfish genus *Nectria* was established by Gray (1840, p. 287) based on specimens in the British Museum which he identified as '*Asterias oculifera* Lam. Oudart' [recte *ocellifera* Lamarck, 1816 (p. 553)]. Gray used an illustration by Oudart (1827) (captioned as *A. ocellifera* Lamarck, and reproduced in Zeidler & Rowe, 1986, fig. 1) when making this identification. Perrier (1875, p. 187; also 1876, p. 3) confirmed that the Oudart plate showed *N. ocellifera* (Lamarck) and stated (1875, p. 324; 1876, p. 244) that the specimen depicted was then preserved in the Jardin des Plantes in Paris. This is probably the specimen of *A. ocellifera* now labelled 'Type (ECAS 670)' in the Muséum National d'Histoire Naturelle, Paris, and it may be regarded as Lamarck's original type specimen.

2. As mentioned by Zeidler & Rowe (1986), of the few mid-nineteenth century dried specimens of *Nectria* now in the Natural History Museum, London likely to have been seen by Gray (1840) when he established the genus, none are *N. ocellifera* (Lamarck). In particular, one specimen (BMNH; 1953: 4.27.24) of *N. ocellata* Perrier, 1875 (see para. 3 below) was certainly seen by Gray: its oldest label has '*Nectria oculifera*' stuck on the back of the board, with '= *Asterias ocellifera* Lamarck' below and 'Gray' pencilled after '*oculifera*' (A.M. Clark, pers. comm.). It is therefore clear that Gray misidentified the specimens he had before him when he diagnosed the genus *Nectria*, and indeed it is likely that he never saw an actual specimen of *N. ocellifera*.

3. Perrier (1875) examined a number of specimens in the British Museum, some of which were almost certainly seen by Gray, and he concluded that Gray (1840) had misidentified his specimens when he established *Nectria*. Perrier (1875, p. 188; also 1876, p. 4) consequently used the specimens as the basis of the new species *Nectria ocellata*. The lectotype of *N. ocellata*, specimen BMNH; 1958: 7.30.20 from Tasmania (purchased from E. Gerrard jun.), was designated by Zeidler & Rowe (1986, p. 120). It was probably used by Gray when establishing *Nectria* even though he cited '*Asterias oculifera* Lam. Oudart' as the only species.

4. In his review of the echinoderm fauna of Australia H.L. Clark (1946) merely followed Gray; he listed (p. 85) *Asterias ocellifera* Lamarck, 1816 as the type species of *Nectria* with no mention of Gray's (1840) misidentification. A.M. Clark (1966) and Zeidler & Rowe (1986) have reviewed *Nectria*, and the former remarked (p. 309) that 'strictly speaking, *N. ocellata* Perrier might be considered as the type species since that is the one that Gray had before him when he diagnosed the genus *Nectria*.'

5. *Nectria* is an endemic southern Australian genus. Its name is well known and stability would not be threatened by replacing *N. ocellifera* (Lamarck) with *N. ocellata* Perrier as the type species. In fact I believe that stability would be strengthened, as *N. ocellifera* is atypical of the genus in some respects and has a restricted distribution (south-west Western Australia) whereas *N. ocellata* is very typical of the genus and is widespread along the southern coast of Australia. In accordance with Article 70b(i) of the Code I propose that the Commission should designate *N. ocellata* as the type species.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Nectria* Gray, 1840 and to designate *Nectria ocellata* Perrier, 1875 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Nectria* Gray, 1840 (gender: feminine), type species by designation in (1) above *Nectria ocellata* Perrier, 1875;

(3) to place on the Official List of Specific Names in Zoology the name *ocellata* Perrier, 1875, as published in the binomen *Nectria ocellata* (specific name of the type species of *Nectria* Gray, 1840).

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Case 2850

Phyllophis carinata Günther, 1864 (currently *Elaphe carinata*; Reptilia, Serpentes): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the specific name of *Phyllophis carinata* Günther, 1864, which has had long usage in an extensive literature, for a snake occurring in southeastern China, northern Vietnam, Taiwan and southern Japan (Ryukyus). For a very short time (March – October 1891) the species was considered to be congeneric with the Central and South American snake *Coluber carinatus* Linnaeus, 1758, rendering Günther's name a junior secondary homonym. *Coluber phyllophis* Boulenger, 1891 was established as a replacement for *C. carinatus* (Günther, 1864) and the latter is thus formally permanently invalid. However, the name *phyllophis* has rarely been used and has not appeared at all since 1929.

Keywords. Nomenclature; taxonomy; Reptilia; Serpentes; snakes; *Elaphe carinata*; China, Japan.

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1. Linnaeus (1758, p. 223) described the Central and South American species of snake *Coluber carinatus*. He referred to the account of the species (1754, p. 31) based on material in the collections described in his *Museum Adolphi Friderici*. Andersson (1899, p. 17) listed and gave measurements for a specimen of *C. carinatus* in the Linnaean collection in the Stockholm museum; this specimen still exists. The species was transferred to the genus *Herpetodryas* Wagler, 1830 by Boulenger ([1 October] 1891, p. 355; ref. 1891b; see Duncan, 1937 for the publication dates of the 1859–1926 volumes of the *Proceedings of the Zoological Society of London*). *C. carinata* has been included in *Chironius* Fitzinger, 1826 since Ruthven's (1922) work appeared.

2. Günther (1864, p. 295, pl. 21, fig. B) described *Phyllophis carinata* as a new genus and species of snake 'said to be from China', based on a specimen in the collections of the Natural History Museum, London (catalogue no. BM(NH) 1946.1.14.58). A second specimen (Günther, 1888, p. 170) from the mountains north

of Kiu Kiang (now Jiujiang Shi, Jiangxi Province) confirmed the origin. In March 1891 Boulenger (p. 281; ref. 1891a) transferred Günther's taxon to the genus *Coluber* Linnaeus, 1758, thereby rendering *C. carinatus* (Günther, 1864) a junior secondary homonym of *C. carinatus* Linnaeus, 1758. Boulenger noted: 'I am compelled to propose a new specific name for this snake, the name *Coluber carinata* [recte *carinatus*] being preoccupied'; he established the replacement name *Coluber phyllophis*. Boulenger redescribed the taxon and referred to 'several specimens' from China; these included an adult specimen described by Günther (1858) as *Elaphis sauromates* Pallas and a young specimen (the holotype) of *Phyllophis carinata* Günther.

3. Günther's (1864) specific name *carinata* was replaced as a junior secondary homonym before 1961 and is therefore permanently invalid (Article 59b of the Code). The valid specific name for the taxon is *phyllophis* Boulenger, 1891 and this was adopted, in combination with *Coluber*, by Müller (1892), Boulenger (1894) and Günther (1896).

4. Stejneger (1898, p. 221) adopted the name *Elaphe* Fitzinger, 1833 and reintroduced the specific name *carinata* Günther, 1864 for the single species he placed in the genus. Stejneger (1907, 1910) assigned further species, formerly placed in *Coluber*, to *Elaphe* and cited (1907, p. 308) *phyllophis* as a junior synonym of *carinata*. A few authors (Wall, 1903; Werner, 1903, 1924, 1929; Stanley, 1915; Steindachner, 1913; Mell, 1922; and Vogt, 1922, 1927) continued to use *phyllophis* Boulenger, 1891 in combination with *Coluber*. Stejneger did not comment on his choice of specific name but Steindachner (1914, p. 337) noted that Stejneger's adoption of *Elaphe* Fitzinger, rather than *Coluber*, for *Phyllophis carinata* Günther meant that there was no homonymy with *Coluber carinatus* Linnaeus and that Günther's specific name could be retained.

5. The combination *Elaphe carinata* (Günther, 1864) has been used for the taxon by most authors since 1907, and without exception since 1929. The more significant recent publications include Pope (1935), Bourret (1936), Smith (1943), Wang & Wang (1956), Coburn (1991), Ota (1991) and Zhao & Adler (1993). The Commission Secretariat holds a list of over 60 further works dating from 1910 to 1991 (45 of which are later than 1945) demonstrating the usage of *Elaphe carinata*. This list could be expanded but suffice it to say that (1) it already far exceeds the minimum required by Article 79c for the usage of the name over the past 50 years (by five different authors in ten publications); (2) many of the works cited are major reviews of broad influence, and some are popular works with wide circulation; (3) in addition to the nominotypical form three subspecies of *E. carinata*, generally recognized as valid, have been described: *E. c. ornithophaga* Bourret, 1936, *E. c. yonaguniensis* Takara, 1962 and *E. c. deqenensis* Yang & Su, 1984. This last subspecies was referred to (twice) as *deqenensis* in the Chinese text of Yang & Su's paper (p. 160), but appeared (twice) as *deqinensis* in the English summary (p. 163). The locality for the type material (now housed in the Kunming Institute of Zoology) was given (a number of times) as Deqin Xian (now Deqen Xian, Yunnan Province). Acting as first revisers we here select *deqenensis* as the definitive spelling. This spelling was adopted by Zhao & Adler (1993, p. 236) but they did not meet the requirements of Article 24 for first reviser selection.

6. We conclude that the resurrection of Boulenger's (1891) replacement specific name *phyllophis*, as would be required by application of the automatic provisions of

the Code, would be severely disruptive to nomenclatural stability, and that a prima facie case has been made for the maintenance of *Elaphe carinata* (Günther, 1864). We make this application under Articles 59b(i) and 79a.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that the specific name *carinata* Günther, 1864, as published in the binomen *Phyllophis carinata*, is not invalid by reason of having been replaced before 1961 as a junior secondary homonym of *Coluber carinatus* Linnaeus, 1758;

(2) to place on the Official List of Specific Names in Zoology the name *carinata* Günther, 1864, as published in the binomen *Phyllophis carinata* (not invalid by reason of having been replaced before 1961 as a junior secondary homonym of *Coluber carinatus* Linnaeus, 1758);

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *phyllophis* Boulenger, 1891, as published in the binomen *Coluber phyllophis* (a junior objective synonym of *Phyllophis carinata* Günther, 1864).

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Case 2879

Aptornis Owen, [1848] (Aves): proposed conservation as the correct original spelling

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Abstract. The purpose of this application is to conserve the name *Aptornis* Owen, [1848, April] for extinct large flightless birds (family APTORNITHIDAE Bonaparte, 1856) from New Zealand. The name first appeared (a week earlier) as *Apterornis*, probably due to a spelling error; this spelling has been used on only four occasions, all since 1985. The name *Apterornis* Sélys-Longchamps, 1848 (October) referred to different extinct flightless birds (family RAPHIDAE Wetmore, 1930), including the white dodo from Réunion.

Keywords. Nomenclature; taxonomy; Aves; extinct flightless birds; *Aptornis*; New Zealand.

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1. Owen ([June 1844]; *Transactions of the Zoological Society of London*, vol. 3, part 3; ref. 1844b) described and illustrated the skeletal remains of extinct large flightless birds from New Zealand. Among them was a tibia (p. 247; pl. 25, figs. 5, 6; pl. 26, figs. 5, 6) on which he based a new species of *Dinornis* Owen, 1843 (the moas), *D. otidiformis*. The name *Dinornis otidiformis* had been mentioned a few months earlier (Owen, [March 1844]; *Proceedings of the Zoological Society of London*, vol. 11; ref. 1844a) but was not then made available. The publication dates of the early volumes of the *Transactions* were set out by Peavot (1913, pp. 814–815); those for the 1830–1859 volumes of the *Proceedings* were listed by Sclater (1893, p. 438). Bruce & McAllan (1990, pp. 458, 459) claimed that *The Literary Gazette* of December 1843 'is the original publication for *D. otidiformis*'. However, there is no description of the taxon and the name was not made available in this work.

2. Further remains of *Dinornis otidiformis* Owen, [1844] were found and the taxon was referred to a new genus. A report (*Proceedings*, vol. 16, p. 1, published on 13 April 1848; ref. 1848a) of a lecture by Owen noted: 'The author alluded to a form of tarso-metatarsal bone, which had supported a strong back-toe, and resembled the metatarsus of the Dodo, but was shorter and thicker, as apparently belonging to the tibia of the species described in a former memoir (*Zool. Trans.* iii. 1843 [recte [1844]], p. 247), to the *Dinornis otidiformis*, but which must belong to a genus (*Apterornis*) distinct from both *Dinornis* and *Palapteryx*'. The name appeared (p. 251) in the index to the part as '*Apterormis*'.

3. In a paper in the *Transactions* (vol. 3, part 5, published on 22 April 1848; ref. 1848b), Owen noted (p. 347): 'There are eight tarso-metatarsal bones, with the articular surface for a very strong hind-toe, and of a conformation more nearly resembling those of the *Dodo* than those of the *Dinornis* or *Palapteryx*, but shorter and thicker in proportion than in the *Dodo*, and appertaining to the same bird as the tibiae and femora in my Memoir of 1843 [recte [1844]] under the name of *Dinornis*

otidiformis ... The large surface for the hind-toe; the strong calcaneal process ... and the more posterior position of the condyle for the inner toe, all concur to indicate the generic distinction of the bird to which it belonged from either *Dinornis* or *Palapteryx*; and I propose to indicate the new genus by the name of *Aptornis*'. The name *Aptornis* was mentioned twice with the same spelling.

4. It seems very probable that the earlier spelling *Apterornis*, in a report not actually written by Owen, was an error, particularly since the further misspelling '*Apterormis*' appeared in the index, but under Article 32b of the Code it is an available name, attributable to Owen (Article 50b). *Apterornis* has not generally been used by subsequent authors and has appeared only three times (all since 1985; see para. 5 below). Mantell (August 1848, p. 233) adopted the name *Aptornis*. Bonaparte (1856, p. 109) based the family APTORNITHIDAE on the genus *Aptornis* Owen, [1848]. The spelling *Aptornis* has been adopted by the vast majority of subsequent authors; these include Fürbringer (1888), Hamilton (1891), Lydekker (1891, pp. 147, 152), Gadow (1893, p. 182), Sharpe (1894, p. 207), Andrews (1896; 1899, pp. 69, 71), Beddard (1898, p. 378), Rothschild (1907, pp. 145, 147), Lowe (1926, p. 177), Oliver (1955, p. 596), Lambrecht (1933, p. 485), Stresemann (1933, p. 763), Dechaseaux (1955, p. 1961), Piveteau (1955, p. 1077), Scarlett (1955, p. 262), Berndt & Meise (1962, p. 96), Trotter (1965, p. 177), Romer (1966, p. 376), Brodkorb (1967, p. 131) and Mlíkovský (1982, p. 725).

5. Olson (1975, p. 63; 1977, p. 373) used the name *Aptornis*. In 1985 (p. 162), however, he discovered the priority of the spelling *Apterornis* and adopted the latter: 'Apterornithidae. The strange birds from the Quaternary of New Zealand that are properly known as *Apterornis* Owen, which name has a week's priority over *Aptornis* Owen, have usually been thought of as rails ...'. This was followed by Carroll (1988, p. 626, 'Apterornithidae *Apterornis* [*Aptornis*]'), who took the classification in his catalogue from Olson (1985), and by Hesse (1990, p. 12) and Livezey (1994). In a joint forthcoming publication with one of us (Weber & Hesse, in press), Hesse has accepted the use of the spelling *Aptornis*. Other authors since 1985 have continued to use the spelling *Aptornis*; these include Müller (1985, p. 618) and Worthy (1989). The Checklist Committee of the Ornithological Society of New Zealand (1990, p. 126), Fordyce (1991, p. 1308), Millener (1991, p. 1331) and Holdaway (1991, pp. 156, 161) have noted that *Apterornis* has priority but have continued to use the name *Aptornis* (and APTORNITHIDAE).

6. Sélys-Longchamps (October 1848, p. 293) described a new genus of large extinct and flightless birds, *Apterornis* (family RAPHIDAE Wetmore, 1930, the dodos). The genus included three or four new nominal species, among them *A. solitarius*, the solitaire or white dodo from Réunion, which is known from descriptions and illustrations of then living specimens. *Apterornis* Sélys-Longchamps was used as a valid generic name by Rothschild (1907, p. 145, pl. 32), Lambrecht (1933, p. 468) and Renshaw (1934, p. 48, pl. on p. 49; 1938), and for a subgenus of *Porphyrio* Brisson, 1760 by Fürbringer (1888, p. 1236). It was cited as a synonym of *Notornis* Owen, 1848 by Sharpe (1899, p. 109), but has been considered a junior subjective synonym of *Raphus* Brisson, 1760 by others (see, for example, Greenway, 1967, pp. 120, 122; Wolters, 1975, p. 43; Luther, 1986, pp. 102, 184). Recognition of the spelling *Apterornis* for the name of Owen's genus would render *Apterornis* Sélys-Longchamps a junior homonym.

7. Owen (1871) described a second *Aptornis* species (*A. defossor*) which was larger than *A. otidiformis*, on the basis of a nearly perfect skull. Owen himself (1871, p. 353; 1872a; 1872b; 1879, pp. 179–188, 290–316, pls. 43, 83–86) consistently used the spelling *Aptornis* for his genus and never mentioned that it had first appeared as *Apterornis*. He noted (1871, p. 353): 'I proposed the name *Aptornis*', and (p. 353, footnote): 'In the 'Revue Zoologique' for October 1848, M. de Sélys-Longchamps proposed the minor abbreviation '*Apterornis*' for some, then vaguely indicated, extinct birds of the Mascarene Islands'. Owen also noted (p. 365, footnote): 'By a curious coincidence, at a later period of the year (1848) in which I proposed a diminutive of '*Apterygiornis*' for the large extinct Coot of New Zealand, the accomplished Belgian ornithologist, M. de Sélys-Longchamps, was moved to propound a minor diminutive of the same term for some loosely indicated Mascarene birds, one of which we now know to have been an extinct Coot of the Mauritius. Without entering into the question of the degree of synonymy of *Aptornis* and *Apterornis*, the priority of proposition of the first will, I apprehend, secure it for the main subject of my present Memoir'.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to rule that the correct original spelling of the generic name *Apterornis* is *Aptornis* Owen, [1848];

(2) to place on the Official List of Generic Names in Zoology the name *Aptornis* Owen, [1848] (gender: masculine), type species by monotypy *Dinornis otidiformis* Owen, [1844];

(3) to place on the Official List of Specific Names in Zoology the name *otidiformis* Owen, [1844], as published in the binomen *Dinornis otidiformis*;

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Apterornis* Owen, [1848] (ruled in (1) above to be an incorrect original spelling of *Aptornis* Owen, [1848]).

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Comments on the proposed conservation of *Fursenkoina* Loeblich & Tappan, 1961 (Foraminiferida)
(Case 2809; see BZN **51**: 98–101)

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I agree with the application of Dr S.A. Revets that the name *Cassidella* Hofker, 1953 should be suppressed. *Cassidella* was based on a misidentification, was not properly set up in the first place, and has been nothing but a cause of confusion since. Furthermore, the type material of *Virgulina tegulata* Reuss, 1846 has been destroyed and there is no adequate topotypic replacement material. These problems can be overcome by the conservation of *Fursenkoina*.

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In 1994 I visited the Smithsonian Institution in Washington, D.C. One of the studies I made was to ascertain the nature and status of '*Virgulina tegulata*' in American collections in relation to the proposed suppression of the name *Cassidella* Hofker, 1953 (type species *Virgulina tegulata* Reuss, 1846; see paras. 3, 7 and 8 of my application).

The Cushman collection in the Smithsonian contains 101 slides labelled '*Virgulina tegulata*'. I found that only 13 contain specimens referable to *V. tegulata* sensu Reuss, and that the others contain specimens referable to *V. reussi* Morrow, '*Loxostomum tegulatum*', and various other species. The so-called 'plesiotype' slides did not contain specimens of *V. tegulata* Reuss. Of the four slides with topotypic specimens only one (Pläner mergel, Zieglei, Zsehernitz bei Dresden) contains specimens of *V. tegulata*.

These observations support my thesis that Cushman also misinterpreted the nature of *V. tegulata* Reuss and that the overwhelming majority of American specimens probably belong to other taxa. While not new in itself, this information does underwrite one of the proposals in my application.

d'Orbigny (1826) gave the locality for a number of his newly described nominal species, including *Virgulina squammosa* (the type species of *Fursenkoina* Loeblich & Tappan, 1961) and *Uvigerina pigmea*, as 'fossile aux environs de Sienne'. I have found no information in the d'Orbigny collection in the Muséum National d'Histoire Naturelle in Paris to pinpoint the exact locality from which *V. squammosa* was described. Cushman (1930) established that the most likely type locality for *U. pigmea* was some of the Pliocene clay pits at Coroncina, near Siena, Italy, and this seems to be the most likely locality for *V. squammosa* also, particularly as specimens have been found there in recent times (see below).

I noted in my application (para. 1) that searches in the collections of the Muséum in Paris have failed to yield any information on possible syntypes of *V. squammosa*. If type material ever existed it must be presumed that it does not do so now. The d'Orbigny collection has suffered a great many losses over the years. Apart from the

disruption caused by moving the collection from Esnandes to Paris, many of the tubes containing d'Orbigny's specimens were lost and others became detached from their labels during the 1912 flooding of the Muséum basements. Unfortunately d'Orbigny's sediment collection held in the Muséum does not contain any material from Siena.

In addition to the proposed suppression of the name *Cassidella* in order to conserve *Fursenkoina*, stability would be further enhanced by the availability of type material for *F. squammosa*. The publication of my paper in the *Bulletin of the Natural History Museum, London*, in which I proposed to designate a neotype (see para. 9(3) of my application), has been delayed. I therefore now designate specimen no. P 52796, which is fully labelled and deposited in the Micropalaeontology Collections in the Natural History Museum, London, as the neotype. The specimen was collected by Dr D.D. Bayliss in 1964 (sample By 103), and is from the Pliocene clays of Cava Semplice, Coroncina, near Siena. The specimen is fully representative of *Fursenkoina squammosa*, which differs from *F. schreibersiana* (Czjzek, 1848) in possessing much higher chambers and much less twisted initial coils. The aperture in *F. schreibersiana* is also much more bulimine in appearance. *F. squammosa* differs from *F. oligocenica* (Hofker, 1951) in possessing much higher chambers and a more reduced apertural lip.

Comment on the proposed conservation of the specific name of *Xerophila geyeri* Soós, 1926 (Mollusca, Gastropoda)
(Case 2870; see BZN **51**: 105–107, 336–338)

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On the basis of the facts presented in Gittenberger's application (BZN **51**: 105–107), and in the comments raised by Bouchet and Gittenberger (BZN **51**: 336–338), the conclusion appears to be inescapable that the five senior subjective synonyms of *Trochoidea geyeri* (Soós, 1926) should indeed be suppressed in accordance with the letter and spirit of Articles 23b and 79 of the Code. However, I sympathise with Bouchet's objections. My reasoning for this encompasses a much wider issue than the one application.

Amongst taxonomists working on Mollusca there is a widespread trend to recognise separate species which hitherto had been united as species complexes. Although such studies, which are now based on modern criteria of biological species recognition, may discover and define many new species, it is a frequent experience that only a few new specific names are required. Many may have been considered as distinct species in the past, albeit often on criteria which are today no longer regarded as sufficient on their own (shell characters, for example).

It follows that an essential part of any modern taxonomic study must be to establish the identity of taxa represented by names hitherto considered to be synonyms. Comments about the 'graveyard of synonymy' and the unscientific methods of some ancient authors in proposing new taxa are subjective and contribute nothing to the solution of the problem, and should not have any bearing on nomenclatural matters. Any taxonomist who does not review old nominal taxa will only create new synonyms or other nomenclatural problems.

It is easy to see that the opportunity offered by Article 79c to suppress senior synonyms if unused for more than 50 years could be misused as a safety net for sloppy work and easy glory: a researcher may discover a species not recognised in the modern literature, does not bother to check whether older names, presently regarded as synonyms, are available and describes the species in question as new. Later the researcher (or another, compelled by concern for the 'stability of nomenclature') may resort to the Commission when the synonymy is discovered. The potential number of such cases could easily inundate the Commission.

At the least the existence of Article 79c is a disincentive to those taxonomists who understand that it is their professional duty to revise old synonymies to ensure that they do not unnecessarily introduce new specific names. The discovery of unused senior synonyms of already recognised nominal species is always a possible outcome of such work, yet the Code suggests that such work should have no nomenclatural result if a researcher considers 'nomenclatural stability' to be endangered.

For these reasons I consider Article 79c in its present form fundamentally flawed; it invites authors to consider deviations from the Principle of Priority the rule rather than the exception and therefore undermines this Principle. Ultimately it may undermine the Code itself because it leads to nomenclatural decisions being made too frequently by applications to the Commission rather than by applying its rules. Of course the opportunity to suppress unused older synonyms should continue to exist but the admissibility of such applications should be considerably tightened.

The heart of the problem is ultimately the notion of 'Stability of Zoological Nomenclature'. Generally speaking, nomenclature is not truly stable (i.e. invariable) because of continuing taxonomic research. Only if research ceases will name changes also cease. The distinction between acceptable name changes due to new taxonomic results and less welcome name changes for nomenclatural reasons alone is blurred and, as outlined above, may lead to undesirable work practices. The Code should therefore not aim at absolute nomenclatural stability but it should provide the rules by which name changes are to be effected and thereby minimise nomenclatural confusion.

The more general considerations outlined above are my primary reason to object to Gittenberger's application. More specifically, even though Gittenberger found 25 citations of the specific name *geyeri* Soós, the species is still one of the less frequent of the European land snail fauna and is hardly known outside the circle of researchers and collectors of land snails. With the current high level of publishing activity it is easy to obtain such a number of citations even for less important species. I believe therefore that a name change for the species in question would only cause an initial inconvenience to an audience which should be inured to name changes anyway, and would serve to highlight the importance of priority and the necessity to establish the identity of all older nominal taxa.

I propose that the specific name of *Helix arceuthophila* Mabille, 1881 should be validated for the species currently known as *Trochoidea geyeri* (Soós, 1926), and placed on the Official List. The simultaneously published *Helix ycaunica* Mabille, 1881 is a shorter name but I feel it should not have precedence as a name based on a little known locality. In respect of the other specific names involved (*H. vicianica* Bourguignat in Locard, 1882, *H. deana* and *H. pleurestha*, both of Berthier (1884), and *Xerophila geyeri* Soós, 1926) no action is proposed. These names remain

available should at some time in the future a researcher find that the species represented is not conspecific with *arceuthophila* Mabille.

Comments on the proposed designation of *Scottia pseudobrowniana* Kempf, 1971 as the type species of *Scottia* Brady & Norman, 1889 (Crustacea, Ostracoda)
(Case 2896; see BZN **51**: 304–305)

(1) Henri J. Oertli
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There is not the slightest doubt about Prof Kempf's conclusion that *S. pseudobrowniana* was the original basis of the genus *Scottia*, and acceptance of his proposals by the Commission would be welcomed by ostracod workers.

(2) Support for the application has also been received from Drs Claude Meisch (*Musée d'Histoire Naturelle, Marché-aux-Poissons, L-2345 Luxembourg*) and I.G. Sohn (*National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, U.S.A.*).

Comments on the proposed conservation of *Lironeca* Leach, 1818 (Crustacea, Isopoda) as the correct original spelling
(Case 2915; see BZN **51**: 224–226; **52**: 67–69)

(1) Giambattista Bello
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I wish to support the proposal by Williams & Bowman to conserve *Lironeca* as the correct original spelling of the name of a genus of parasitic isopods.

In addition to the arguments used in their application, with all of which I agree, I would like to stress that although zoological names can be arbitrary combinations of letters the vast majority do have a meaning. Workers have to remember hundreds of names, and they are greatly helped by this. The names may recall particular features of the taxa or their habitats, or be formed from geographical, personal or mythological names, or be evocative of vernacular names of the animals. The meaning of Leach's (1818) names for eight genera of isopods is quite clear: they are anagrams of the personal name Caroline or Carolina. *Livoneca*, on the contrary, has no meaning.

The intentions of Leach are evident, and the conservation of *Lironeca* is in perfect agreement with them. I maintain that whenever possible the original intention of the author of scientific names has to be respected.

(2) Robert Y. George
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I have researched on isopod crustacea for nearly three decades, describing several new genera and many new species. On the basis of this experience I wish to support

Dr Bowman's application to conserve the spelling *Lironeca* Leach, 1818. Leach used anagrams of Carolina to coin the names of many flabelliferan isopod genera, and it is perfectly clear that *Livoneca* was simply a printer's error. Let us correct the spelling to *Lironeca* by acting positively in this case.

Comments on the proposal to remove the homonymy between BRACHYPTERINAE Erichson, [1845] (Insecta, Coleoptera) and BRACHYPTERINAE Zwick, 1973 (Insecta, Plecoptera), and proposed precedence of KATERETIDAE Ganglbauer, 1899 over BRACHYPTERINAE Erichson, [1845]
(Case 2865; see BZN **51**: 309–311)

(1) P.A. Audisio
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1. My application, co-authored with Dr R. Fochetti and Prof Dr P. Zwick, seeks to remove the homonymy between the insect family-group names BRACHYPTERINAE Erichson, [1845] (Coleoptera) and BRACHYPTERINAE Zwick, 1973 (Plecoptera). I should like to clarify some points relating to the coleopteran name and to make a further proposal to the Commission.

2. Erichson (1843) divided the family NITIDULIDAE Latreille, 1807 into three groups, the NITIDULINAE, the CARPOPHILINAE, and the 'Cateretes'. This last group, which unlike the others was not referred to by a name with a family-group ending, comprised the genera *Brachypterus* Kugelann, 1794 and *Cercus* Latreille, 1796, but did not include *Kateretes* Herbst, 1793. Erichson commented that the group contained only two genera but that their species had hitherto been placed under three names; he allocated some of the species placed in *Kateretes* by Herbst (1793) to the other genera. Under Articles 11f(1) and 64 of the Code the name KATERETIDAE is not available from Erichson (1843), although it has been cited recently with this authorship and date by Silfverberg (1992, p. 49) and by one of us (Audisio, 1993, p. 781).

3. Erichson ([1845]) introduced the name BRACHYPTERINAE for the same subfamily, i.e. the two genera *Brachypterus* and *Cercus*. He now considered that, although Herbst's genus *Kateretes* included all sorts of beetles, it was based mainly on species of *Cis* Latreille, 1796 and was in no way related to *Brachypterus* and *Cercus* (a view not shared by later authors). He proposed that the name 'Cateretes' should be used for the *Cis* group. The name BRACHYPTERINAE Erichson, [1845] was used by several authors in the mid-19th century for a subfamily within the NITIDULIDAE but, with few exceptions (see Verhoeff, 1923, p. 9), has not been used since Marseul (1885, p. 19). It has not been used at all for more than 50 years.

4. The name CATERETINI was first made available by Ganglbauer (1899, p. 447) for a tribe of five genera which included *Kateretes* Herbst, 1793 (with *Cercus* cited as a synonym) and *Brachypterus*. Despite the seniority and previous usage of the name BRACHYPTERINAE, that of KATERETINAE (sometimes spelled CATERETINAE) was universally adopted and, until very recently, used for a subfamily within the NITIDULIDAE which included, with other genera, *Brachypterus* and *Kateretes*. The KATERETIDAE have lately been considered to be a family separate from the NITIDULIDAE (see

Audisio, 1993). *Dermestes pedicularius* Linnaeus, 1758 (p. 357), one of the eight nominal species included in *Kateretes* Herbst, 1793, was designated the type species.

5. As noted in para. 2 of the application, we (P.A. Audisio and J. Jelinek) are undertaking a worldwide revision of the KATERETIDAE. We will probably wish to use the subfamily name BRACHYPTERINAE Erichson, [1845] for *Brachypterus* and related genera (but not including *Kateretes*). However, the name BRACHYPTERINAE predates that of KATERETIDAE Ganglbauer, 1899 and its use for a subfamily within the KATERETIDAE is not in accord with the principle of priority. On the other hand, adoption of BRACHYPTERIDAE as the name for the family would upset the century-old usage of the name KATERETINAE or KATERETIDAE (see, for example, Audisio, 1984, 1987, 1988, 1989, 1993; Nunberg, 1976; Kirejtshuk, 1986, 1989, 1992; Silfverberg, 1992; Spornraft, 1992). We therefore propose that the name KATERETIDAE Ganglbauer, 1899 should be given precedence over BRACHYPTERINAE Erichson, [1845]. This proposal is additional to those published on BZN **51**: 310.

6. The designation by Thomson (1859, p. 67) of *Dermestes urticae* Fabricius, 1792 as the type species of *Brachypterus* Kugelann, 1794 is much earlier than that of Parsons (1943), given by us in para. 1 of the application. The entry for *Brachypterus* in para. (2)(a) of the application should therefore be amended.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that the family-group name KATERETIDAE Ganglbauer, 1899 and other family-group names based on *Kateretes* Herbst, 1793 are to be given precedence over BRACHYPTERINAE Erichson, [1845] and other family-group names based on *Brachypterus* Kugelann, 1794;

(2) to place on the Official List of Generic Names in Zoology the name *Kateretes* Herbst, 1793 (gender: masculine), type species by subsequent designation *Dermestes pedicularius* Linnaeus, 1758;

(3) to place on the Official List of Specific Names in Zoology the name *pedicularius* Linnaeus, 1758, as published in the binomen *Dermestes pedicularius* (specific name of the type species of *Kateretes* Herbst, 1793);

(4) to place on the Official List of Family-Group Names in Zoology the name KATERETIDAE Ganglbauer, 1899 (type genus *Kateretes* Herbst, 1793) with the endorsement that it and other family-group names based on *Kateretes* are to be given precedence over BRACHYPTERINAE Erichson, [1845] (type genus *Brachypterus* Kugelann, 1794) and other family-group names based on *Brachypterus*;

(5) to add to the proposal on BZN **51**: 310, para. (4)(a), to place on the Official List of Family-Group Names in Zoology the name BRACHYPTERINAE Erichson, [1845] the endorsement that it and other family-group names based on *Brachypterus* Kugelann, 1794 are not to be given priority over KATERETIDAE Ganglbauer, 1899 and other family-group names based on *Kateretes* Herbst, 1793.

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(2) A.F. Newton

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I wish to comment on the application dealing with the family-group names BRACHYPTERINAE Erichson, [1845] and BRACHYPTERINAE Zwick, 1973. I agree with the authors's proposals to conserve the current spelling of the much older name BRACHYPTERINAE Erichson and to modify the later name to eliminate the homonymy.

In para. 2 of the application the authors cited Erichson (1843) for the establishment of the family name KATERETIDAE, with BRACHYPTERINAE Erichson, [1845] as a subfamily within this family. It should be noted that Erichson (1843) did not include in his group 'Cateretes' a valid genus *Kateretes* (or its emendation *Cateretes*), but rather seems to have appropriated this generic name to be the group name; hence Erichson's group name 'Cateretes' is not available (Article 11f(i)1). A family-group name based on *Kateretes* apparently was first made available by Ganglbauer (1899, p. 447; not p. 518 as cited in the application). Thus, the family name should be BRACHYPTERIDAE Erichson, [1845], with KATERETINAE Ganglbauer, 1899 as a subfamily or synonym. This situation, pointed out in two works on Coleoptera family-group names that are now in press (by J.F. Lawrence & A.F. Newton, and by J. Pakaluk et al.), makes action to conserve Ganglbauer's (1899) KATERETIDAE a necessity. (*Editorial note*. A proposal to conserve the name KATERETIDAE Ganglbauer, 1899 by giving it precedence over BRACHYPTERINAE Erichson, [1845] is set out in Dr Audisio's comment above).

Comments on the proposed conservation of *Sphaerocera* Latreille, 1804 and *Borophaga* Enderlein, 1924 (Insecta, Diptera)

(Case 2907; see BZN **51**: 312–315)

(1) R.H.L. Disney

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1. In their application Brown & Sabrosky provide (BZN **51**: 313, paras. 4 and 5) an interesting and exhaustive review of the identity of *Musca subsultans* Linnaeus, 1767. Professor O.W. Richards was a specialist on the SPHAEROCERIDAE, hence it is not surprising that he found it hard to believe that earlier authors could confuse a phorid specimen and a sphaerocerid (see para. 4 of the application). However, as a specialist on the PHORIDAE I can testify that the most frequent non-phorids sent to me for identification are sphaerocerids. Even distinguished entomologists have confused the two families when the rear veins of a sphaerocerid have been particularly pale.

2. The suggestion by Richards (1930) that the phorid specimen labelled as *Musca subsultans* in the collection of the Linnean Society of London may not be an original specimen is simply speculative. Richards identified it as *Phora flavimana* Meigen, 1830, but it is actually the species called *Borophaga okellyi* by Schmitz (1937); Schmitz did not examine this specimen. Like Richards, Brues (1903) confused this species with *P. flavimana*, which is a junior (by the first reviser action of Zetterstedt, 1848, p. 2886) subjective synonym of *P. femorata* Meigen, 1830 (p. 213). The valid specific name of the type species of *Borophaga* is hence *femorata*, and there is no need either to take any action concerning *flavimana* (cf. the title and abstract of the application) or to treat it as relevant to the Linnean Society specimen.

3. I support the proposed suppression of *Borborus* Meigen, 1803 (proposal (1)(a) on BZN **51**: 313). However, I oppose the suppression of the specific name of *Musca subsultans* Linnaeus, 1767 (proposal (1)(b)); this is the valid name of the *Borophaga* species otherwise called *B. okellyi* Schmitz, 1937. Ecologists and ethologists do not read the BZN, and they have as their priority minimum changes to the names they find in relevant key works. The two most recent such works dealing with the European species of *Borophaga* are Disney (1983, 1991) and both employ the name *Borophaga subsultans*. The name *subsultans* should be put on the Official List of Specific Names, not be treated as in proposal (5) on BZN **51**: 314.

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(2) Brian V. Brown

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I would like to reply to the above comment by Dr Disney on the application by Dr Sabrosky and myself.

The phorid *Borophaga okellyi* Schmitz, 1937 occurs not only in Europe but also in North America. This name has been in continuous use in Noth America. It is used in the major works (Borgmeier, 1963; Schmitz & Beyer, 1965). The species is

cataloged as *B. okellyi* in all the main collections, including those of the United States National Museum and the Museum of Comparative Zoology at Harvard.

In Europe *B. okellyi* was in use for 45 years until Disney (1982) introduced the name *Borophaga subsultans* in the PHORIDAE, despite the long and extensive interpretation of *subsultans* as being a name in the SPHAEROCERIDAE (for over a century in *Borborus* and, after Richards (1930), in *Sphaerocera*). He did this only on the basis of the Linnean Society specimen, which may or may not be original. Disney argues that the major recent literature in Europe (his own publications) uses *B. subsultans* and that further change should be avoided. We must weigh a European change versus a North American change. Since *okellyi* has been in the European phorid literature for 32 years longer than *subsultans* I prefer *Borophaga okellyi* as the valid name of this species. There remains, too, the fact that most literature references to *subsultans* are in the sphaerocerid sense.

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Comment on the proposed conservation of *Hydromantes* Gistel, 1848 (Amphibia, Caudata) by the designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species

(Case 2868; see BZN **50**: 219–223; **51**: 149–153)

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1. A rapid reading of the comments published in BZN **51**: 149–153 may give an impression of simple universal agreement among their authors for the proposal by Smith & Wake (BZN **50**: 219–223). Careful reading shows that this impression would be wrong. In fact the comments can be classed in two groups. Some express the view that the name *Hydromantes* should be maintained in the sense understood by Dunn (1923), i.e. for the European species *Hydromantes italicus* Dunn, 1923, *Salamandra genei* Temminck & Schlegel, 1838, and species considered to be congeneric with them. This view does not infringe taxonomic freedom: it leaves individual biologists free to decide whether related American species should be placed in the same genus or whether they should be in a distinct genus, of which the valid name is *Hydromantoides* Lanza & Vanni, 1981 (type species *Spelerpes platycephalus* Camp, 1916).

2. The second attitude is very different. It is based on the view that the American species should *not* be placed in a separate genus, and that the name *Hydromantes* should be retained for both them and the European species for which the valid name *Speleomantes* Dubois, 1984 exists. According to this view neither *Hydromantoides* nor *Speleomantes* are acceptable names. We are here far from the basic principle that the Code should never restrict 'the freedom of taxonomic thought or action'

(Preamble, pp. 2, 3). I am not convinced that the remark by Hillis (BZN **51**: 152) that the action proposed by Smith & Wake does not 'impinge upon the debate over the content of *Hydromantes*' is right: it is not borne out by some of the other comments. In the name of 'stability of nomenclature', will taxonomic revisions in the future be prevented because of the 'pointless task' (Jennings, BZN **51**: 149) of changing names in collections and popular books? There are numerous zoological groups which were for long believed to be a single taxon but which are now known to consist of many, and the number of labels which have had to be changed is vastly greater than in the case of the poorly studied group of newts here under discussion. The attitude exemplified by the comment of Jennings gives support to those who think that taxonomy is old-fashioned, that everything is known about biodiversity, and that therefore no funds are necessary for this part of biology.

3. One point deserves a special comment, since it is of wider relevance than this particular case. The members of the Commission cannot have detailed knowledge of the taxonomy and nomenclature of all groups, and in resolving the many cases submitted to them have the duty of looking at the proper use of the general principles of nomenclature. Unavoidably, they have to rely for factual details on the information provided by specialists in the applications and comments published in the *Bulletin*. It is vital, therefore, that authors should take great care to avoid giving a misleading impression. It is an important part of the argument by Smith & Wake (see BZN **50**: 221, para. 7) and some of their supporters (Jennings, BZN **51**: 149; Cook, **51**: 152; Stebbins, **51**: 153) that 'subsequent authors have not adopted Dubois's (1984) nomenclature'. Unfortunately this statement is simply not true, as can be easily seen by inspection of the *Zoological Record*. The truth is that there has been a progressive adoption of this taxonomy and nomenclature by specialists of this group of amphibians, as shown by the following data. I have given the Commission Secretariat a list of references which documents that, in the period 1985–1987, there were 9 uses of the name *Hydromantes* for the European species against 1 of *Speleomantes*; in 1988–1990, 10 of *Hydromantes* against 4 of *Speleomantes*; in 1991–1993, 5 of *Hydromantes* against 8 of *Speleomantes*. The papers using *Speleomantes* had a total of 23 authors. These data are not exhaustive (especially after June 1993, the last month covered by the published issues of the *Zoological Record* for amphibians), but they show a clear trend. They refute the misleading statement by Smith & Wake, and on the contrary show that we are now in the transition period which occurs in every similar case of nomenclatural change (be this due to nomenclatural or to taxonomic causes). Examination of the papers mentioned above shows that the authors who have adopted the nomenclatural change are mostly zoologists involved in faunistic and taxonomic works, while those who did not make the change were working on physiological, anatomical and other biological aspects where taxonomy and nomenclature are of less immediate interest. It is noteworthy that among the works where the new (and correct) nomenclature was adopted there are four important books on European herpetology (Castanet & Guyétant, 1989; Delaugerre & Cheylan, 1992; Nöllert & Nöllert, 1992; Stumpel-Rienks, 1992); the last of these is published under the auspices of the Societas Europea Herpetologica and is part of a series of major reference books (*Handbuch der Amphibien und Reptilien Europas*, edited by Wolfgang Böhme).

4. *Hydromantes* Gistel, 1848 is a replacement name for *Geotriton* Bonaparte, 1832, and consequently both the genera have as type the nominal species *Salamandra exigua* Laurenti, 1768; however, as documented by Dubois (1984), this type fixation was based on misidentification by Bonaparte of the taxonomic species later called *Hydromantes italicus* Dunn, 1923. This species, which is the type species of *Speleomantes*, belongs to the PLETHODONTIDAE, in which family *Hydromantes* has always been used, whereas *Salamandra exigua* belongs to the SALAMANDRIDAE.

5. Whatever the eventual ruling on this case, the Opinion should specify the status of the name *Geotriton*, which was used for 91 years in many publications, before *Hydromantes* was resurrected by Dunn (1923) on mistaken grounds. As I have pointed out before (Dubois, 1984), there is no need for Commission action in the present case; the names *Hydromantoides* Lanza & Vanni, 1981 and *Speleomantes* Dubois, 1984 exist and and have been in recent valid usage. Those who wish to place the American and European species in one genus can use the former name. Rather than change the type species of *Hydromantes*, it would be much more logical for the Commission (if action by it were necessary) to conserve the name *Geotriton*, which was clearly created by Bonaparte (1832) for the animals in question, was used by all authors for nearly a century, and of which the name *Hydromantes* is nothing but a replacement name, i.e. a junior objective synonym. Moreover, in Italy, the only European country rich in populations of these rare newts, this genus is still known under the vernacular name 'geotritone'. *Geotriton* reflects much more accurately the terrestrial and cavernicolous characteristics of this group than does the totally inappropriate name *Hydromantes*.

6. I must confess that, in all that has been written about this case, I have had some sympathy for a single argument in favour of the conservation of the name *Hydromantes*; it is the fact that this name is used to denote these animals in some lists of threatened and protected species. But the Commission should carefully consider the general consequences of accepting this argument. It could lead to the 'protection' of names which are threatened not for nomenclatural reasons but because of a taxonomic reassessment of the groups involved. Should zoologists accept a limitation of their taxonomic freedom in order not to disturb the stability of 'official' lists of animals in computer databases, conservation texts, and so on? This is contrary to a basic principle of the Code. Even in the present case the argument is being used to reject the recognition of a separate genus (*Hydromantoides*) for the American species, though there are biological reasons for separating them from the European group (i.e. *Speleomantes*, or *Hydromantes* if Smith & Wake's proposed type designation is accepted). Behind the rather insignificant case of this relatively little studied group there are at stake general 'philosophical' questions of zoological nomenclature which the Commission should consider before voting on the application.

7. In the past 15 years I have surveyed most of the existing literature on the nomenclature of amphibians, from 1758 and even before; I doubt if anyone else living has studied as many old books and papers with the aim of stabilizing the nomenclature of this group of animals. I have found a rather low number of cases where the current nomenclature was clearly wrong. In some of these cases I resolved the problems 'by myself', that is through the normal provisions of the Code. When I discovered the *Hydromantes* problem in 1984 I did consider referring it to the Commission, but I realized that it would probably suffer the same destiny as some

others that I had already submitted and that the problem would be likely to remain unsolved for years. I therefore decided (Dubois, 1984) simply to follow the Code in this case. Experience shows that this may be the quickest and most efficient course; nevertheless I am grateful to Smith & Wake for raising this case now.

Additional references

Castanet, J. & Guyétant, R. (Eds.). 1989. *Atlas de répartition des amphibiens et reptiles de France*. 191 pp. Société Herpétologique de France, Paris.

Delaugerre, M. & Cheylan, M. 1992. *Atlas de répartition des batraciens et reptiles de Corse*. 128 pp. Parc Naturel Régional de Corse et Ecole Pratique des Hautes Etudes.

Comments on the proposed conservation of *Lycognathophis* Boulenger, 1893 (Reptilia, Serpentes)
(Case 2877; see BZN **51**: 330–331)

(1) Hidetoshi Ota
Tropical Biosphere Research Center and Department of Biology, University of the Ryukyus, Nishihara, Okinawa 903–1, Japan

I am in full support of the proposal to conserve the name *Lycognathophis* Boulenger, 1893 by suppressing *Scopelophis* Fitzinger, 1843. The latter name has not been used even since Dowling (1990) pointed out its priority. Although Dowling implied that *Lycognathophis* had been little used, it has actually been employed for over a century for *L. seychellensis* (Schlegel, 1837), the only endemic snake in the Seychelles. The resurrection of *Scopelophis* would be seriously confusing both to snake systematists and to biogeographers of the Seychelles.

(2) Ronald A. Nussbaum
Department of Herpetology, Museum of Zoology, University of Michigan, Ann Arbor, Michigan 48109–1079, U.S.A.

Conservation of *Lycognathophis* Boulenger, 1893 is fully justified; the alternative name *Scopelophis* Fitzinger, 1843 was published without any diagnosis and has not been used at all. In reviving *Scopelophis*, Dowling described the name *Lycognathophis* as being misleading, since it implies that this natricine snake is a lycodontine, but this has no bearing: many generic names are misleading to some extent.

(3) Edmond V. Malnate
The Academy of Natural Sciences of Philadelphia, 19th and the Parkway, Logan Square, Philadelphia, Pennsylvania 19103, U.S.A.

I urge the Commission to accept this application. To my knowledge the species involved has not been associated with any generic name other than *Lycognathophis*. Fitzinger's name clearly has priority but the issue is stability of nomenclature; under Article 79c of the Code an exception to priority is warranted.

(4) Support for the application has also been received from Professor Edwin L. Bell (*Albright College, Reading, Pennsylvania 19612–5234, U.S.A.*) and Drs A. Dale

Belcher (*Albuquerque Biological Park, Albuquerque, New Mexico 87102, U.S.A.*), Donald G. Broadley (*The Natural History Museum, Centenary Park, Selborne Avenue, Bulawayo, Zimbabwe*), Joseph T. Collins (*The University of Kansas Natural History Museum, Lawrence, Kansas 66045–2454, U.S.A.*) and Raymond F. Laurent (*Fundación Lillo, Miguel Lillo 251, 4000 Tucumán, Argentina*).

Comments on the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*
(Case 2928; see BZN **51**: 135–146, 266–267, 342–348; **52**: 78–93)

(1) Mary R. Dawson

The Carnegie Museum of Natural History, 4400 Forbes Avenue, Pittsburgh, Pennsylvania 15213–4080, U.S.A.

I write with regard to the application for the conservation of 11 generic names first published by Brisson (1762). I concur with the view so well expressed by Anthea Gentry in the case that, although the work by Brisson is rejected, the names listed have very well established usage and should be conserved as the approved generic names for these mammals. I hope the application succeeds. It would be foolish to replace those well understood names.

My direct interest is especially strong in the cases of *Glis* and *Tragulus*, as I have worked with fossil relatives of these genera and am of the opinion that these names should be retained in order to promote clarity in the literature. In the case of *Glis*, a few American workers have recently decided to resurrect the name *Myoxus* for species usually known as *Glis*. I object to this resurrection and favor retention of the name *Glis* (and GLIRIDAE) for these rodents, whose fossil record can be traced into the Eocene. Retention of this name would result in nomenclatural stability and promote clarity in phylogenetic studies; retention would also discourage needless confusion in a fairly sizeable body of literature dealing with fossil and Recent members of the family GLIRIDAE. The opinions of not only Gentry but also Ellerman, Morrison-Scott, Corbet and others are correct: *Glis* should be retained.

(2) Keith Seaman

Hertfordshire and Middlesex Wildlife Trust, Grebe House, St Michael's Street, St Alban's, Hertfordshire AL3 4SN, U.K.

I am a Wildlife Ranger and am engaged in field studies on the status and distribution of the edible dormouse (*Glis* Brisson, 1762) and the otter (*Lutra* Brisson, 1762).

I fully support Gentry's application to the Commission to conserve 11 of Brisson's (1762) generic names for mammals. I find it quite ridiculous that after hundreds of years some workers feel the need to change the names of various taxa. I support the notion that stability needs to be brought into what is clearly a confusing situation. For us professionals and amateurs alike, having different names for the same species is absurd and can only be counter-productive. Why change accepted names of taxa without scientifically-proven biological reasons?

(3) José Roberto Moreira
Wildlife Conservation Research Unit, University of Oxford, Department of Zoology, South Parks Road, Oxford OX1 3PS, U.K.

I am writing to comment on Case 2928.

I am particularly interested in capybaras, the species with which I work. The name *Hydrochoerus* was used predominantly until the late 1980's and especially by the Venezuelans, where most work on capybaras has been done. It is only recently that *Hydrochaeris* has started being adopted. Although *Hydrochaeris* better describes a capybara (the word means 'water lover' while *Hydrochoerus* means 'water pig' owing to its resemblance to pigs), *Hydrochoerus* was the name originally used (Brisson, 1762) and has been used more often in publications.

I deeply support Gentry's application as it will bring stability to the nomenclature, not only of capybaras but also of other closely related species like agoutis and pacas.

(4) Alan W. Gentry
c/o Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

I write to support the proposed conservation of the name *Tragulus* Brisson, 1762. The historical sequence of three significant events concerning *Tragulus* is clear.

Firstly, in 1762 Brisson founded the genus for animals without horns and included five ruminant species. The first listed was '*indicus*' which was described as having canines in the upper jaw. By these characters (no horns, presence of upper canines) Brisson could not have been referring to bovids. The first reference cited under '*indicus*' was 'Capra pedibus digito humano angustioribus' of Linnaeus (1748).

Secondly, Merriam (1895) selected '*indicus*' as the type species of *Tragulus*. He chose to equate this with *Capra pygmea* Linnaeus, 1758, the Royal antelope (family BOVIDAE). This was probably because, two years after Brisson (1756) first referred 'Capra pedibus ...' to *Tragulus* '*indicus*', Linnaeus (1758) ascribed it instead to *C. pygmea*. Linnaeus's second reference under *pygmea* was to Seba (1734, p. 10 [recte p. 70], pl. 43, fig. 3). Seba's illustration shows a young and hornless ruminant which, in its long metacarpals and lack of lateral hoofs, clearly establishes the bovid status of *Capra pygmea*.

Thirdly, Ellerman & Morrison-Scott (1951) suggested that Brisson's '*indicus*' was identifiable as *Cervus javanicus* Osbeck, 1765, a Malayan chevrotain (family TRAGULIDAE). This accords with Brisson's description of the species as having upper canines and no horns.

The simplest course now open to the Commission is to follow the prudent lead of Ellerman & Morrison-Scott (1951) so that *Tragulus* can continue to be used in its familiar sense, without disruption to nomenclature. *Tragulus* is the type genus of the family TRAGULIDAE, a name in widespread use in the palaeontological literature for many extinct, mainly Miocene, species of hornless ruminants with enlarged upper canines in males.

Other courses of action proposed for the name *Tragulus* are flawed or more cumbersome. The proposal to take *Tragulus* from Pallas (1767) or (1779), which was based on *Capra pygmea*, with type species *Cervus javanicus* Osbeck attributes to

Pallas an action he did not make in his writings. The same applies to *Tragulus* Boddaert (1785) for which the identifiable bovid *Capra pygmea* Linnaeus, 1758 is again the type species. Use of *Lagonebrax* Gloger, 1841 or *Moschiola* would certainly upset stability, as Grubb pointed out in an earlier comment on this case (see BZN **51**: 346).

Stone & Rehn (1902) suggested that the name *Tragulus javanicus* (Osbeck, 1765) referred to the larger Malay chevrotain. This was followed by Lydekker (1915) and most others until van Bemmel (1949) demonstrated that the only species of mouse deer on Java, the type locality, was the lesser Malay chevrotain (previously known as *Tragulus kanchil* (Raffles, 1821)). Since van Bemmel (1949) and Ellerman & Morrison-Scott (1951) the name *Tragulus javanicus* has been applied to the lesser Malay chevrotain and *T. napu* (F. Cuvier, 1822) to the larger Malay chevrotain.

The name *Moschiola*, which refers to the Indian spotted chevrotain, is ascribed by most authors to 'Hodgson, 1843' (p. 292; or 1844, citing the same reference). They apparently believe the name to have been made available by the inclusion of *Tragulus mimenoides* Hodgson, 1842b (p. 914; spelt *memennoides* in Hodgson, 1842a, p. 220) and that *mimenoides* is Erxleben's (1777) *Moschus meminna*. However, Hodgson recorded *mimenoides* as a new species; no description, illustration or reference to a previous author was given in any of Hodgson's publications and *Moschiola* is therefore unavailable with this authorship.

Under Article 11e of the Code the name *Moschiola* is available from Gray (1852, p. 246), who cited it as a synonym of his new generic name *Meminna* (based on *Meminna indica* Gray, 1852 which was given as a replacement name for *Moschus meminna* Erxleben, 1777, presumably to avoid tautonymy; nec *Memina* Gray, 1821 which was based on *Moschus pygmaeus* (= *Capra pygmea* Linnaeus, 1758) and a junior homonym of the marsupial name *Memina* Fischer von Waldheim, 1814). *Meminna* Gray, 1852 is a junior homonym of *Meminna* Agassiz, 1842 (an emendation of *Memina* Gray, 1821) and it has not been used. The name *Moschiola* is much in use, with *M. meminna* Erxleben cited as the type species; in the past it has been employed as a subgenus of *Tragulus* but in recent publications it has been adopted as a generic name. Flerov (1931, p. 77) correctly recorded *Moschiola* Hodgson as a nomen nudum, and took the name from Thomas (1916) rather than from Gray (1852).

Additional references

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Flerov, C. 1931. On the generic characters of the fam. Tragulidae. *Comptes Rendus de l'Académie des Sciences de l'URSS*, **1931**(3): 75–79.

Hodgson, B.H. 1842a. Classified catalogue of mammals of Nepal, corrected to the end of 1840, first printed in 1832. *Calcutta Journal of Natural History*, **2**: 212–221, 413–414.

Hodgson, B.H. 1842b. Classified catalogue of mammals of Nepal (corrected to the end of 1841, first printed in 1832). *Journal of the Asiatic Society of Bengal*, **10**: 907–916.

Hodgson, B.H. 1843. Classified catalogue of mammals of Nepal. *Calcutta Journal of Natural History*, **4**: 284–294.

Lydekker, R. 1915. *Catalogue of the ungulate mammals in the British Museum (Natural History)*, vol. 4 (Artiodactyla). xxi, 438 pp. British Museum, London.

Seba, A. 1734. *Locupletissimi rerum naturalium thesauri ...*, vol. 1. [27], 178 pp., 111 pls.

Stone, W. & Rehn, J.A.G. 1902. A collection of mammals from Sumatra, with a review of the genera *Nycticebus* and *Tragulus*. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **54**(1): 127–142.

Thomas, O. 1916. On the generic names applicable to chevrotains (Tragulidae). *Annals and Magazine of Natural History*, (8)**18**: 72–73.
van Bemmel, A.L.V. 1949. Notes on the Indo-Australian mammals (1 2). *Treubia*, **20**: 378–380.

(5) Enrique Roberto Justo
Casilla de Correos 157, 6300 Santa Rosa - La Pampa, Argentina

Anthea Gentry's application to conserve some of Brisson's (1762) mammal generic names reminds me of the statement of my late teacher Dr Georges Dennler (1959): 'Nomenclature rules must give stability to the names in use, particularly when they answer to the demands of logic and geographical accuracy'.

I think this fits Gentry's application to the Commission. The impeccable arguments must be heeded, otherwise a great deal of confusion will be introduced, especially when these names are ordinarily being used by past and present mammalogists, and textbooks, papers and other publications available to students include them.

I wish to express my decided support for Gentry's application.

Additional reference

Dennler, G. 1959. Zoogeografía y nomenclatura. *Actas y Trabajos del 1 Congreso Sudamericano de Zoología*, **1**: 243–2

(6) Volker Fahlbusch, Kurt Heissig, Helmut Mayr & Gertrud Rössner
Bayerische Staatssammlung für Paläontologie und historische Geologie, Richard-Wagner-Strasse 10/11, D-80333 Munich, Germany

We wish to comment on the proposed rejection of Brisson's (1762) work *Regnum Animale* with the conservation of the mammalian generic names *Philander*, *Pteropus*, *Glis*, *Cuniculus*, *Hydrochoerus*, *Meles*, *Lutra*, *Hyaena*, *Tapirus*, *Tragulus* and *Giraffa*.

The conservation of these names by the Commission will 'promote the general stability and universality in the scientific names of animals' as set out in the Preamble of the Code. Since the Monaco Congress of 1913 the Commission has been empowered to conserve generally-adopted names endangered by a strict application of the rules of zoological nomenclature. In this case the Commission is asked to suspend the rules in favour of conserving the generic names cited above.

The proposed conservation of these names is in agreement with the facts. The majority of authors have accepted the names, and their use over 200 years is sufficient reason for their adoption.

A decision by the Commission in 1955 (Direction 16) conserved some of the generic names in Brisson's (1760) work on birds. In our view a corresponding decision should be made on the 11 mammal names. In 1938 G.H.H. Tate noted in relation to Brisson (1762): 'By analogy the generic names of mammals therein proposed should be accepted' (see BZN **51**: 135). The mammal name *Odobenus* Brisson, 1762 was accepted in 1957 (Opinion 467) and we believe the other 11 names should likewise be conserved.

(7) Patrick J. Boylan
City University, Northampton Square, London EC1V 0HB, U.K.

I wish to comment on Case 2928, the proposed rejection of *Regnum Animale* ..., Ed. 2 (Brisson, 1762) with the conservation of certain mammalian generic names.

The application demonstrates the scale of the present uncertainty and the overall unsatisfactory position in relation to the mammalian generic names of Brisson (1762). This has been widely recognised for many years, and the position needs to be resolved in a comprehensive manner. Gentry's current application attempts to do this in a logical and well-argued way.

It is clear that the rejection of Brisson's (1762) work *Regnum Animale* is the correct first step. However, a number of very important and well-established generic names for common taxa of Recent and fossil mammals derive from Brisson, as Gentry points out in the application. Within Quaternary mammal studies, *Glis*, *Cuniculus*, *Meles*, *Lutra* and *Hyaena* are all extremely well established generic names (as they are in the zoological, taxonomic and ecological literature also), and in the interests of stability of nomenclature it is most important that these are conserved under the Commission's plenary powers. I cannot comment from a position of specialist knowledge in relation to the other six generic names affected (*Philander*, *Pteropus*, *Hydrochoerus*, *Tapirus*, *Tragulus* and *Giraffa*) although it seems clear these are equally well established in modern general literature.

In her application Gentry notes that the junior objective synonym *Taxus* Cuvier & Geoffroy Saint-Hilaire, 1795, for badgers (*Meles* Brisson) has never been used in the scientific literature. In support of this it is worth recording that even the first author of *Taxus* seems to have abandoned it. In the first edition of his very large scale and wide-ranging treatise *Recherches sur les Ossemens Fossiles des Quadrepèdes* (Cuvier, 1812), arguably the foundation of comparative fossil vertebrate studies, Cuvier (p. 18) correctly diagnosed the genus taxonomically but used only the French vernacular 'les blaireaux'. Nine years later in his new and greatly enlarged second edition of the work Cuvier (1823, p. 244, pl. 18, figs. 3–1 to 3–5) again mainly used the vernacular in both his text and accompanying figures. However, when he did use scientific terminology (Cuvier, 1823, p. 244) the genus was recorded not as *Taxus* but as *Meles*, while apparently claiming authorship himself of the name: 'Des Blaireaux (MELES Cuv.)'.

So far as one of the other names proposed for rejection is concerned, *Euhyaena* Falconer, 1868, it is not immediately clear why Hugh Falconer considered adopting this new generic name when *Hyaena* was by then so well established. Falconer died in 1865 leaving much unpublished material which was compiled and edited for publication by Charles Murchison from a wide variety of manuscripts, notes and even letters (Murchison, 1868; Prestwich, 1899; Boylan, 1977, 1979). Some sections were apparently substantially complete and fully checked at the time of Falconer's death but there were many fragments among the items brought together by his niece, Miss Grace Milne (later Lady Prestwich), and Murchison and published as *Palaeontological Memoirs* (Falconer, 1868). Substantial parts of the work were, and remain today, of great importance in fossil mammal taxonomy and stratigraphy, and the taxa and names first published are always attributed to Falconer. However, as Murchison himself admitted (1968, p. ix), it is by no means certain that Falconer would have wished many of the more fragmentary and unchecked items of the 47 pieces in vol. 2 to be published.

In those parts of the *Palaeontological Memoirs* that appear to have been tolerably complete at the time of Falconer's death he invariably used the name *Hyaena* (for example, Falconer, 1868, vol. 1, pp. 343, 548, pls. L and M, *Hyaena sivalensis* Falconer & Cautley; vol. 2, pp. 497, 525, 542, 552, 556). The generic-level name *Euhyaena*, by contrast, is only found in two very short fragments which Murchison found in one of Falconer's notebooks of 1863 (Falconer, 1868, vol. 2, pp. 464–465). One fragment is a list, 'Synopsis of nomenclature of living hyaenas', which includes '*Hyaena* (*Euhyaena*) *striata* Zimmermann', with *Canis hyaena* Linnaeus noted as a synonym, while the second fragment has some brief notes on the species of Recent hyaenas. Certainly, for the avoidance of doubt, the name *Euhyaena* Falconer, 1868 should be rejected, as proposed by Gentry.

Additional references

Boylan, P.J. 1977. *The Falconer papers, Forres*. 63 pp. Leicestershire Museums for Moray District Council, Leicester.

Boylan, P.J. 1979. The controversy of the Moulin-Quignon jaw: the role of Hugh Falconer. Pp. 171–199 *in* Jordanova, L. & Porter, R., *Images of the earth. Essays in the history of the environmental sciences*. 282 pp. British Society for the History of Science, Monograph No. 1.

Cuvier, G. 1812. *Recherches sur les ossemens fossiles des quadrepèdes*, part 4e, chapter 3 (Sur les espèces des animaux. Carnassiers). Déterville, Paris.

Cuvier, G. 1823. *Recherches sur les ossemens fossiles*, Ed. 2, vol. 4. 514 pp., 39 pls. Dufour & D'Ocagne, Paris.

Murchison, C. (Ed.). 1868. Preface. Biographical sketch. Pp. vii xii, xxiii liii *in* Falconer, H., *Palaeontological memoirs and notes of the late Hugh Falconer*, vol. 1. lvi, 590 pp., 34 pls.

Prestwich, Lady [Grace]. 1899. *Life and letters of Sir Joseph Prestwich*. xv, 444 pp. Blackwood, Edinburgh.

(8) D. Kock

Forschungsinstitut und Naturmuseum Senckenberg, Senckenberganlage 25, 60325 Frankfurt am Main, Germany

It is with great interest that I studied the application to conserve 11 mammal generic names first published by Brisson (1762).

I support the arguments and the intention of this application. It seems to me to be the best way to ensure nomenclatural stability. I agree with placing the names on the Official List of Generic Names in Zoology.

(9) Pierre Mein, M. Hugueney, C. Guérin & R. Ballesio

Centre des Sciences de la Terre, Université Claude Bernard, 27–43 Boulevard du 11 Novembre, F-69622 Villeurbanne cedex, Lyon 1, France

We are mammalian palaeontologists at the Université and share the same view. We absolutely agree with the conservation of Brisson's (1762) mammalian generic names *Philander*, *Pteropus*, *Glis*, *Cuniculus*, *Hydrochoerus*, *Meles*, *Lutra*, *Hyaena*, *Tapirus*, *Tragulus* and *Giraffa*.

It would be stupid to reject names that have been used everywhere for more than 200 years. We hope that the Commission will quickly agree with the proposition.

Comment on the proposed conservation of *Loris* E. Geoffroy Saint-Hilaire, 1796 (Mammalia, Primates)
(Case 2953; see BZN **51**: 332–335)

R.H. Crompton
Department of Human Anatomy and Cell Biology, University of Liverpool, P.O. Box 147, Liverpool L69 3BX, U.K.

I write as the Chief Editor of *Folia Primatologica*. Consequent on the proposed rejection of Brisson's (1762) *Regnum Animale*, I support the proposal to conserve the name *Loris* E. Geoffroy Saint-Hilaire, 1796, rather than the senior synonym *Tardigradus* Boddaert, 1785, for the slender loris of Sri Lanka and southern India.

The name *Loris* has been used for a very considerable time by primatologists and zoologists, while that of *Tardigradus* is only found in the scientific literature of the earliest quarter of this century and before, when a variety of different generic names for this taxon, including *Stenops* Illiger, 1811, were used quite indiscriminately. I can think of no good reason for the replacement of the name *Loris* by the archaic *Tardigradus*, and it would greatly benefit nomenclatural stability to continue to use *Loris*, recognised by zoologists for the greater part of this century.

OPINION 1803

Robulina nodosa Reuss, 1863 (currently *Lenticulina nodosa*; Foraminiferida): neotype confirmed as the name-bearing type

Keywords. Nomenclature; taxonomy; Foraminiferida; Cretaceous; *Lenticulina nodosa*.

Ruling

(1) It is hereby confirmed that the neotype designated by Bartenstein (1974) is the name-bearing type for *Robulina nodosa* Reuss, 1863.

(2) The name *nodosa* Reuss, 1863, as published in the binomen *Robulina nodosa* and as defined by the neotype (specimen no. C 30169 in the Naturhistorisches Museum, Basle) designated by Bartenstein (1974), confirmed in (1) above, is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2854

An application to confirm the neotype designated by Bartenstein (1974) as the name-bearing type of *Robulina nodosa* Reuss, 1863 following rediscovery of original type material was received from Drs Helen Meyn and Jürgen Vespermann (*Institut für Geowissenschaften, Technische Universität Braunschweig, Braunschweig, Germany*) on 29 June 1992. After correspondence the case was published in BZN **50**: 200–201 (September 1993). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the publication by Meyn & Vespermann referred to in the application as '1993 in press' appeared in *Senckenbergiana Lethaea*, **74**(1/2): 49–272 (31 August 1994).

Meyn & Vespermann (1994, pl. 29, fig. 9) refigured Reuss's (1863) original illustration of *Robulina nodosa* and (pp. 146, 148, pl. 29, figs. 10a–c) redescribed and figured the two rediscovered syntypes (nos. 974 and 345 in the Reuss collection in the Naturhistorisches Museum in Vienna). They noted that the neotype designated by Bartenstein (1974) and the syntypes were conspecific (see also para. 2 of the application).

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 200. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys, Thompson, Willink

Negative votes — 3: Dupuis, Halvorsen and Mahnert.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Voting for, Bouchet commented: 'I favour the retention of the neotype because Meyn & Vespermann's (1994, pl. 29, fig. 10) illustrations of a syntype of *Robulina nodosa* show that the aperture is broken and this is an important character in

lenticulinid foraminiferans'. Voting against, Mahnert commented: 'Since conspecificity between the neotype and syntypes can be established without problems, I see no reason to retain the neotype; the original description and type material seem sufficient to characterize the species'.

Original references

The following is the original reference to the name placed on an Official List by the ruling given in the present Opinion:

nodosa, *Robulina*, Reuss, 1863, *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe*, **46**(1): 78.

The following is the reference for the designation of the neotype of *Robulina nodosa* Reuss, 1863:

Bartenstein, H. 1974. *Eclogae Geologicae Helvetiae*, **67**: 540.

OPINION 1804

Cristellaria humilis Reuss, 1863 (currently *Astacolus humilis*; Foraminiferida): neotype replaced by rediscovered lectotype, and *Rotalia schloenbachi* (currently *Notoplanulina? schloenbachi*; Foraminiferida): placed on the Official List

Keywords. Nomenclature; taxonomy; Foraminiferida; Cretaceous; *Astacolus humilis*; *Notoplanulina? schloenbachi*.

Ruling

(1) The neotype designation for *Cristellaria humilis* Reuss, 1863 made by Bartenstein (1974) is hereby set aside.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *humilis* Reuss, 1863, as published in the binomen *Cristellaria humilis* and as defined by the lectotype (specimen no. 970 in the Reuss collection in the Naturhistorisches Museum in Vienna) designated by Meyn & Vespermann (1994);

(b) *schloenbachi* Reuss, 1863, as published in the binomen *Rotalia schloenbachi* and as defined by the lectotype (specimen no. 1685 in the Reuss collection in the Naturhistorisches Museum in Vienna) designated by Meyn & Vespermann (1994).

History of Case 2855

An application to replace the neotype of *Cristellaria humilis* Reuss, 1863 with a lectotype designated from rediscovered original type material, and to place the specific name of *Rotalia schloenbachi* Reuss, 1863 on the Official List, was received from Drs Helen Meyn and Jürgen Vespermann (*Institut für Geowissenschaften, Technische Universität Braunschweig, Braunschweig, Germany*) on 29 June 1992. After correspondence the case was published in BZN **50**: 202–204 (September 1993). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the publication by Meyn & Vespermann referred to in the application as '1993 in press', in which lectotypes for *Cristellaria humilis* Reuss, 1863 and *Rotalia schloenbachi* Reuss, 1863 were designated, appeared in *Senckenbergiana Lethaea*, **74**(1/2): 49–272 (31 August 1994).

Meyn & Vespermann (1994, pl. 39, fig. 6) refigured Reuss's (1863) original illustrations of *Cristellaria humilis* and (pp. 176–177, pl. 39, fig. 7a, b) described and illustrated the selected lectotype (specimen no. 970 in the Reuss collection in the Naturhistorisches Museum in Vienna). Meyn & Verspermann (*in litt.* to the Secretariat, May and June 1992) noted that Reuss's (1863) description and illustrations, the neotype designated by Bartenstein (1974) and the lectotype all referred to the same taxon; that the lectotype was far better preserved than the neotype; and that, following their visit to Vienna in 1988, Bartenstein had agreed to the proposal to set aside the neotype.

Meyn & Vespermann (1994, pl. 64, fig. 10) also refigured Reuss's (1863) original illustration of *Rotalia schloenbachi* and (pp. 256–258, pl. 64, fig. 11a c) described and

figured the lectotype (specimen no. 1685 in the Reuss collection in Vienna). Meyn & Vespermann (*in litt.* to the Secretariat, June 1992) noted that Reuss's (1863) description and illustration, the neotype invalidly designated by Crittenden & Price (1991), and the lectotype all referred to the same taxon. They also noted: 'We received a letter from Crittenden in 1991 in which he admitted that they [Crittenden & Price, 1991] were 'a trifle premature' in designating a neotype for *Rotalia schloenbachi*'.

The proposals relating to *Cristellaria humilis* Reuss, 1863 and *Rotalia schloenbachi* Reuss, 1863, published in BZN **50**: 203, were offered separately for voting.

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 203. At the close of the voting period on 1 March 1995 the votes were as follows:

Proposals (1) and (2)(a) (*Cristellaria humilis* Reuss, 1863):

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys, Thompson, Willink

Negative votes — 1: Halvorsen.

Proposal (2)(b) (*Rotalia schloenbachi* Reuss, 1863):

Affirmative votes — 21: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Lehtinen, Macpherson, Mahnert, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Thompson, Willink

Negative votes — 4: Halvorsen, Kraus, Martins de Souza and Štys.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Kraus commented: 'I vote against the proposal relating to *Rotalia schloenbachi* as the invalidity of the neotype designation by Crittenden & Price (1991) is unquestionable; there is no reason why *schloenbachi* should be placed on the Official List'.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

humilis, *Cristellaria* Reuss, 1863, *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe*, **46**(1): 65.

schloenbachi, *Rotalia*, Reuss, 1863, *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe*, **46**(1): 84.

The following is the reference for the designation of lectotypes of *Cristellaria humilis* and *Rotalia schloenbachi*, both of Reuss (1863):

Meyn, H. & Vespermann, J. 1994. *Senckenbergiana Lethaea*, **74**(1/2): 176 and 256 (respectively).

OPINION 1805

Doris grandiflora Rapp, 1827 (currently *Dendrodoris grandiflora*) and *Doridopsis guttata* Odhner, 1917 (currently *Dendrodoris guttata*) (Mollusca, Gastropoda): specific names conserved

Keywords. Nomenclature; taxonomy; Gastropoda; nudibranchs; *Dendrodoris grandiflora* (Mediterranean); *Dendrodoris guttata* (Japan, Australia).

Ruling

(1) Under the plenary powers the specific name *guttata* Risso, 1826, as published in the binomen *Doris guttata*, is hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *grandiflora* Rapp, 1827, as published in the binomen *Doris grandiflora*;

(b) *guttata* Odhner, 1917, as published in the binomen *Doridopsis guttata*.

(3) The name *guttata* Risso, 1826, as published in the binomen *Doris guttata* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2886

An application for the conservation of the specific name of *Doris grandiflora* Rapp, 1827 was received from Drs Jesús Ortea and Ángel Valdés (*Laboratorio de Zoologia, Universidad de Oviedo, Oviedo, Spain*) on 13 April 1993. After correspondence the case was published in BZN **51**: 7–9 (March 1994). Notice of the case was sent to appropriate journals.

A comment in support from Dr Richard C. Willan (*Museum and Art Gallery of the Northern Territory, Darwin, Northern Territory, Australia*) and Mr Robert Burn (*Geelong, Victoria, Australia*) was published in BZN **51**: 256 (September 1994).

These authors also pointed out that suppression of the unused specific name of *Dendrodoris guttata* (Risso, 1826) would conserve the junior secondary homonym *D. guttata* (Odhner, 1917), currently much in use, as well as the junior synonym *D. grandiflora* (Rapp, 1827). It was proposed on the voting paper that the specific name of *Doris guttata* Risso, 1826 should be suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy (cf. Proposal 6(1) on BZN **51**: 8), and that the specific name of *Doridopsis guttata* Odhner, 1917 should be placed on the Official List, in addition to that of *Doris grandiflora* Rapp, 1827 (cf. Proposal (2)).

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 8, with the amendment to Proposal (1) and addition to Proposal (2) noted above. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Ride, Savage, Schuster, Štys, Thompson, Willink

Negative votes — 1: Nye.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

grandiflora, *Doris*, Rapp, 1827, *Nova Acta Physico-Medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum*, **13**: 520.

guttata, *Doridopsis*, Odhner, 1917, *Kungliga Svenska Vetenskapsakademiens Handlingar*, **52**(16): 62.

guttata, *Doris*, Risso, 1826, *Histoire naturelle des principales productions de l'Europe Méridionale et particulièrement de celles des environs de Nice et des Alpes Maritimes*, vol. 4, p. 33.

OPINION 1806

Ammonites nodosus (currently *Ceratites nodosus*; Cephalopoda, Ammonoidea): specific name attributed to Schlotheim, 1813, and a lectotype designated

Keywords. Nomenclature; taxonomy; Ammonoidea; Middle Triassic; ammonite; *Ceratites nodosus*.

Ruling

(1) Under the plenary powers:

(a) the specific name *nodosa* Bruguière, 1798, as published in the binomen *Ammonites nodosa*, and all uses of the name prior to the publication of *Ammonites nodosus* Schlotheim, 1813 are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy;

(b) all previous fixations of type specimens for the nominal species *Ammonites nodosus* Schlotheim, 1813 prior to that by Urlichs & Mundlos (1987) are hereby set aside;

(c) all previous designations of type species for the nominal genus *Ceratites* de Haan, 1825 are hereby set aside and *Ammonites nodosus* Schlotheim, 1813 is designated as the type species.

(2) The name *Ceratites* de Haan, 1825 (gender: masculine), type species by designation under the plenary powers in (1)(c) above *Ammonites nodosus* Schlotheim, 1813, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *nodosus* Schlotheim, 1813, as published in the binomen *Ammonites nodosus* (specific name of the type species of *Ceratites* de Haan, 1825) and as defined by the lectotype (specimen no. C785 in the Museum für Naturkunde an der Humboldt Universität, Berlin) designated by Urlichs & Mundlos (1987), ruled in (1)(b) above, is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *nodosa* Bruguière, 1789, as published in the binomen *Ammonites nodosa* and as suppressed in (1)(a) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2732

An application to maintain the current usage of the specific name of *Ammonites nodosus* by attributing the name to Schlotheim (1813), and by fixing as the lectotype one of Schlotheim's specimens, was received from Dr Max Urlichs (*Staatliches Museum für Naturkunde Stuttgart, Stuttgart, Germany*) on 7 July 1989. After correspondence the case was published in BZN **48**: 31–35 (March 1991). Notice of the case was sent to appropriate journals.

Comments in support were received from Prof Dr G. Hahn (*Rauschenberg, Germany*, published in BZN **48**: 246, September 1991); Prof Dr G. Tichy (*Institut für Geologie und Paläontologie, Universität Salzburg, Salzburg, Austria*, published in BZN **49**: 290, December 1992); Dr M. Horn (*Hessisches Landesamt für Bodenforschung, Wiesbaden, Germany*) and Prof Dr F. Strauch & Dr M. Bertling (*Geologisch-Paläontologisches Institut und Museum, Westfälische Wilhelms-Universität Münster, Münster, Germany*), both published in BZN **50**: 54–56 (March 1993); and Dr Ulrich

Lehmann (*Geologisch-Paläontologisches Institut und Museum, Universität Hamburg, Hamburg, Germany*, published in BZN **50**: 284, December 1993).

An opposing comment from Dr E.T. Tozer (*Geological Survey of Canada, Vancouver, British Columbia, Canada*), published in BZN **49**: 145–149 (June 1992), included alternative proposals. These proposals were supported by the late Mr R.V. Melville (*Richmond, Surrey, U.K.*) and by Dr N.J. Silberling (*U.S. Geological Survey, Denver, Colorado, U.S.A.*) in comments published in BZN **50**: 55–56 (March 1993) and BZN **50**: 141–142 (June 1993) respectively. Replies to Tozer and to Melville from the author of the application were published in BZN **50**: 229–231 (September 1993) and BZN **50**: 284–285 (December 1993) respectively. Dr Tozer withdrew his alternative proposals in BZN **51**: 147–149 (June 1994; see below).

It was noted on the voting paper that the case was complicated by five factors: (1) relevant 18th century collections were long believed lost and two concepts of *Ceratites nodosus*, which were based on old illustrations rather than specimens, had entered the literature; (2) Rieber & Tozer (1986) rediscovered one collection (that of Scheuchzer) in Zürich and designated a lectotype of *Ammonites nodosa* [recte *nodosus*] Bruguière from it, believing their action to be valid under the principle of priority; (3) Urlichs & Mundlos (1987) independently rediscovered another collection (Schlotheim's) in Berlin and proposed (subject to the Commission's ratification) a lectotype in accordance with what they maintained to be the usage of '*nodosus*' in this century (and compatible with that of earlier times); (4) disagreement between these pairs of authors as to the past understandings of the name *Ceratites nodosus* (the nominal species *A. nodosus* is the type species of *Ceratites* de Haan, 1825); (5) *C. nodosus*, in the sense of the specimen designated by Urlichs & Mundlos, is an important index fossil in the Middle Triassic Muschelkalk of central Europe, where it characterises the Lower Ladinian '*nodosus* zone', while *C. nodosus* sensu Rieber & Tozer occurs only at a lower (Upper Anisian) horizon.

The application sought the conservation of the (1987) Urlichs & Mundlos lectotype on the grounds of usage of the name *Ceratites nodosus*, and particularly because of its importance in this sense in stratigraphy. The Commission Secretariat had a list of 86 references demonstrating this usage. The name was attributed to Schlotheim (1813) rather than to Bruguière (1798) on the grounds that the usage of *C. nodosus* was based on a figure by Schlotheim and that the proposed type specimen was from the Schlotheim collection. The specimen (no. C785 in the Museum für Naturkunde an der Humboldt Universität, Berlin), given by Urlichs & Mundlos (1987) as the proposed lectotype of *A. nodosus* Schlotheim, was in accord with Schlotheim's (1823, pl. 31, fig. 1) illustration of *Ammonites nodosus*, with usage of the name by de Haan (1825) and Philippi (1901), and with the current concept of *Ceratites nodosus* in the region where it occurs. The application proposed that *Ammonites nodosa* Bruguière, 1789 be suppressed as a senior homonym, and that *C. nodosus* with the authorship of Schlotheim (1813) be designated the type species of *Ceratites* de Haan, 1825.

The application was supported by a large number of Austrian and German palaeontologists. Initially it was opposed by Dr E.T. Tozer and others on priority grounds, but subsequently (BZN **51**: 147–149) Dr Tozer reluctantly withdrew his opposition in order that the European stratigraphic concept of *Ceratites nodosus* could continue, although he did not accept some historical aspects of the case as presented by Dr Urlichs.

The original proposals were presented for voting. Approval of them on pragmatic grounds would, it was agreed by all, stabilise the biostratigraphic use of *C. nodosus* and would not affect the universal understanding of the generic name *Ceratites* de Haan, 1825. Rejection, on the other hand, would cause confusion to continue. Urlichs (BZN **48**: 33 and **50**: 230, 284) and other commentators noted that acceptance of Tozer's proposals would transfer the name *nodosus* to the taxon currently called *C.* (*Doloceratites*) *robustus robustus*; this occurs not in the '*nodosus*-Zone' but at a lower horizon of the Middle Triassic Muschelkalk sequence of central Europe. The taxon currently known as *nodosus* would be called *C. undatus* (Reinecke, 1818) and the subgenus *Ceratites* (*Doloceratites*) would be called *C.* (*Ceratites*); *C.* (*Doloceratites*) would require a new name.

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **48**: 34. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys, Thompson, Willink

Negative votes — none.

Dupuis and Lehtinen abstained.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Cocks commented: 'This sort of case is precisely why the Commission exists. There seems little doubt that by following the lucid arguments of Melville (BZN **50**: 55–56), for example, the true taxonomic concept of *nodosus* should be as originally stated by Tozer. However, these arguments are rightly set aside by the overriding concept of usefulness. By changing the key species of the *nodosus* Zone nothing would be achieved except instability of biostratigraphical nomenclature and the reasonable ire of the majority of geologists directed towards their palaeontological colleagues'. Heppell commented: 'I am in favour of the stability of the nomenclature of the type fossil ammonites which characterize the Triassic *Ceratites nodosus* zone but I disagree with the method used to achieve this. Both Melville and Tozer pointed out that Schlotheim (1813) was not establishing a new nominal species, so we are dealing with the interpretation of *Ammonites nodosa* Bruguière, 1789. As the specimens, cited illustrations and description of that nominal species are either ambiguous or at odds with the accepted identity of the fossils of the eponymous geological zone, it is certainly necessary to fix the name to an acceptable type specimen by the use of the plenary powers. I believe this would have best been achieved by setting aside all previous fixations of type specimen for *A. nodosa* Bruguière and selecting a neotype. The 'lectotype' of *A. nodosa* 'Schlotheim' would be a candidate for this if, as it seems to be, it is in agreement with the current geological usage of Bruguière's name'. In abstaining Dupuis made a similar comment, and Lehtinen noted: 'I am abstaining because Schlotheim never described taxa that it is proposed should now bear his authorship'.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Ceratites de Haan, 1825, *Monographiae Ammoniteorum et Goniatiteorum Specimen*, p. 39.
nodosa, *Ammonites*, Bruguière, 1798, *Encyclopédie méthodique. 1. Histoire naturelle des vers*, p. 43.
nodosus, *Ammonites*, Schlotheim, 1813, *Beiträge zur Naturgeschichte der Versteinerungen in geognostischer Sicht. Taschenbuch für die gesammte Mineralogie*, **7**: 100.

The following is the reference for the designation of the lectotype of *Ammonites nodosus* Schlotheim, 1813:
Urlichs, M. & Mundlos, R. 1987. *Stuttgarter Beiträge zur Naturkunde*, (B)**128**: 7.

OPINION 1807

Johnstonia Quatrefages, 1866 (Annelida, Polychaeta): conserved

Keywords. Nomenclature; taxonomy; Polychaeta; marine worms; *Johnstonia*.

Ruling

(1) Under the plenary powers the name *Johnstonia* Quatrefages, 1849, and all uses of the name *Johnstonia* prior to the publication of *Johnstonia* Quatrefages, 1866 (January), are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The name *Johnstonia* Quatrefages, 1866 (gender: feminine), type species by subsequent monotypy *Jonhstonia* [recte *Johnstonia*] *clymenoides* Quatrefages, [1866 (summer)], is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *clymenoides* Quatrefages, [1866], as published in the binomen *Jonhstonia* [recte *Johnstonia*] *clymenoides* (specific name of the type species of *Johnstonia* Quatrefages, 1866) and as defined by the lectotype (specimen A'(R)-1868, no. 239b in the Quatrefages collection in the Muséum National d'Histoire Naturelle, Paris) designated by Mackie & Gobin (1993), is hereby placed on the Official List of Specific Names in Zoology.

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Johnstonia* Quatrefages, 1849, as suppressed in (1) above;

(b) *Johnstonia* Fuhrmann, 1920 (a junior homonym of *Johnstonia* Quatrefages, 1866);

(c) *Johnstonia* Basir, 1956 (a junior homonym of *Johnstonia* Quatrefages, 1866).

History of Case 2859

An application for the conservation of the generic name *Johnstonia* Quatrefages, 1866 was received from Drs Andrew S.Y. Mackie (*National Museum of Wales, Cardiff, Wales, U.K.*) and Judith Gobin (*Institute of Marine Affairs, Carenage, Trinidad and Tobago*) on 22 July 1992. After correspondence the case was published in BZN **51**: 10–13 (March 1994). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 11. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys, Willink

Negative votes — 1: Thompson.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

clymenoides, *Jonhstonia* [recte *Johnstonia*], Quatrefages, [1866 (summer)], *Histoire naturelle des annelés marins et d'eau douce. Annélides et géphyriens*, vol. 2, p. 244.
Johnstonia Basir, 1956, *Zoologica* (Stuttgart), **106**: 16.
Johnstonia Fuhrmann, 1920, *Festschrift für Zschokke* (Basel), **27**: 18.
Johnstonia Quatrefages, 1849, *Annales des Sciences Naturelles (Zoologie)*, (3)**12**: 304, footnote.
Johnstonia Quatrefages, 1866 (January), *Annals and Magazine of Natural History*, (3)**17**: 21.

The following is the reference for the fixation of *Johnstonia clymenoides* Quatrefages, [1866] as the type species of the nominal genus *Johnstonia* Quatrefages, 1866:
Quatrefages, A. de. [1866 (summer)]. *Histoire naturelle des annelés marins et d'eau douce. Annélides et géphyriens*, vol. 2, p. 244.

The following is the reference for the designation of the lectotype of *Johnstonia clymenoides* Quatrefages, [1866]:
Mackie, A.S.Y. & Gobin, J. 1993. *Zoologica Scripta*, **22**: 231.

OPINION 1808

Mastotermes darwiniensis Froggatt, 1897 and *Termes meridionalis* Froggatt, 1898 (currently *Amitermes meridionalis*) (Insecta, Isoptera): neotypes retained following rediscovery of syntypes

Keywords. Nomenclature; taxonomy; Isoptera; termites; *Mastotermes darwiniensis*; *Amitermes meridionalis*; Australia.

Ruling

(1) It is hereby confirmed:

(a) that the neotype designated by Hill (1942) is the name-bearing type for *Mastotermes darwiniensis* Froggatt, 1897;

(b) that the neotype designated by Hill (1942) is the name-bearing type for *Termes meridionalis* Froggatt, 1898.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *darwiniensis* Froggatt, 1897, as published in the binomen *Mastotermes darwiniensis* and as defined by the neotype (a female alate registered as Type No. 9033 in the Australian National Insect Collection, CSIRO, Canberra) designated by Hill (1942), confirmed in (1)(a) above;

(b) *meridionalis* Froggatt, 1898, as published in the binomen *Termes meridionalis* and as defined by the neotype (a soldier registered as Type No. 9077 in the Australian National Insect Collection, CSIRO, Canberra) designated by Hill (1942), confirmed in (1)(b) above.

History of Case 2889

An application to confirm the neotypes designated by Hill (1942) as the name-bearing types of *Mastotermes darwiniensis* Froggatt, 1897 and *Termes meridionalis* Froggatt, 1898 following rediscovery of original type material was received from the late Dr J.A.L. Watson (*CSIRO, Canberra, Australia*) on 23 April 1993. After correspondence the case was published in BZN **51**: 14–16 (March 1994). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 16. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Bouchet (part), Cocks, Corliss, Dupuis (part), Hahn, Heppell, Kabata, Kraus, Lehtinen, Macpherson, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys, Willink

Negative votes — 4: Halvorsen, Holthuis, Mahnert and Thompson.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Bouchet and Dupuis voted for the retention of the neotype of *Termes meridionalis* but against the retention of that of *Mastotermes darwiniensis*. Voting against both proposals Holthuis commented: 'As the syntypes are in good condition and are the

same species as the neotypes I see no reason to recognize the latter'. Thompson commented: 'In relation to the *M. darwiniensis* neotype (para. 8 of the application), the late Dr Watson wrote that 'the designation has had a substantial audience and has major taxonomic standing'. However, not one termite specialist has commented on this case and I see no support for overturning the original author's types'.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

darwiniensis, *Mastotermes*, Froggatt, 1897, *Proceedings of the Linnean Society of New South Wales*, **21**: 519.

meridionalis, *Termes*, Froggatt, 1898, *Proceedings of the Linnean Society of New South Wales*, **22**: 726.

The following is the reference for the designation of the neotypes of *Mastotermes darwiniensis* Froggatt, 1897 and *Termes meridionalis* Froggatt, 1898:

Hill, G.F. 1942. *Termites (Isoptera) from the Australian Region*, pp. 21 and 336 (respectively).

OPINION 1809

Bruchus Linnaeus, 1767, *Ptinus* Linnaeus, 1767 and *Mylabris* Fabricius, 1775 (Insecta, Coleoptera): conserved

Keywords. Nomenclature; taxonomy; Coleoptera; pests; *Bruchus*; *Ptinus*; *Mylabris*.

Ruling

(1) Under the plenary powers the following names are hereby suppressed:

(a) *Bruchus* Geoffroy, 1762, and all uses of the name *Bruchus* prior to the publication of *Bruchus* Linnaeus, 1767, for the purposes of both the Principle of Priority and the Principle of Homonymy;

(b) *Mylabris* Geoffroy, 1762, and all uses of the name *Mylabris* prior to the publication of *Mylabris* Fabricius, 1775, for the purposes of both the Principle of Priority and the Principle of Homonymy;

(c) *Laria* Scopoli, 1763 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Bruchus* Linnaeus, 1767 (gender: masculine), type species by subsequent designation by Latreille (1810) *Dermestes pisorum* Linnaeus, 1758;

(b) *Ptinus* Linnaeus, 1767 (gender: masculine), type species by subsequent designation by Latreille (1810) *Cerambyx fur* Linnaeus, 1758;

(c) *Mylabris* Fabricius, 1775 (gender: feminine), type species by subsequent designation by Latreille (1810) *Meloe cichorii* Linnaeus, 1758.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *pisorum* Linnaeus, 1758, as published in the binomen *Dermestes pisorum* (specific name of the type species of *Bruchus* Linnaeus, 1767);

(b) *fur* Linnaeus, 1758, as published in the binomen *Cerambyx fur* (specific name of the type species of *Ptinus* Linnaeus, 1767);

(c) *cichorii* Linnaeus, 1758, as published in the binomen *Meloe cichorii* (specific name of the type species of *Mylabris* Fabricius, 1775).

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:

(a) BRUCHIDAE Latreille, 1802 (type genus *Bruchus* Linnaeus, 1767);

(b) PTINIDAE Latreille, 1802 (type genus *Ptinus* Linnaeus, 1767).

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Bruchus* Geoffroy, 1762, as suppressed in (1)(a) above;

(b) *Mylabris* Geoffroy, 1762, as suppressed in (1)(b) above;

(c) *Laria* Scopoli, 1763, as suppressed in (1)(c) above.

History of Case 2618

An application for the conservation of the generic names *Bruchus* Linnaeus, 1767, *Ptinus* Linnaeus, 1767 and *Mylabris* Fabricius, 1775 was received from Dr L.

Borowiec (*Agricultural University, Wroclaw, Poland*) on 13 July 1987. After correspondence the case was published in BZN **45**: 194–196 (September 1988). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the application proposed the conservation of three widely used names threatened by senior synonyms and/or homonyms first published by Geoffroy (1762). The case was published before that by Dr I.M. Kerzhner on the status of Geoffroy's work (Case 2292, published in BZN **48**: 107–133; June 1991) but voting was held over until the resolution of the latter case. Support for the conservation of *Bruchus* Linnaeus, 1767 and *Mylabris* Fabricius, 1775 was included in Dr Kerzhner's application (BZN **48**: 119 and 121 respectively).

Dr Kerzhner & Dr A.G. Kirejtshuk (*Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia*) supported Dr Borowiec's application in a comment published in BZN **48**: 143 144 (June 1991). They also pointed out that Pierce's (1916) designation of *Laria salicis* Scopoli, 1763 as the type species of *Laria* Scopoli, 1763 rendered the latter name a senior subjective synonym of *Bruchus* Linnaeus, 1767 (cf. para. 3 of the application). They proposed (BZN **48**: 143) that *Laria* should be suppressed.

A comment from Mrs A. Gentry (*ICZN, c/o The Natural History Museum, London, U.K.*), published in BZN **48**: 144, noted that *Mylabris* sensu Geoffroy (1762) was a senior subjective synonym of *Bruchus* Linnaeus, 1767 (as in para. 5 of the application, not objective as in para. 2), and cited recent references demonstrating the use of the latter name.

Geoffroy's (1762) work *Histoire abrégée des insectes qui se trouvent aux environs de Paris*, in which the names *Bruchus* and *Mylabris* first appeared, was rejected for nomenclatural purposes and placed on the Official Index in Opinion 228 (April 1954). In Opinion 1754 (March 1994) the Commission ruled that, notwithstanding the use of polynominal specific names, Geoffroy's work was available for the establishment of generic names; it was accordingly deleted from the Official Index and placed on the Official List with an endorsement recording its status. It followed from Opinion 1754 that the names *Bruchus* and *Mylabris* were available from Geoffroy (1762); suppression by the Commission of these names as used in this work would allow them to be placed on the Official Index with this authorship and date.

Geoffroy (1762, vol. 1) described and figured species in *Bruchus* and *Mylabris*; he placed *Cerambyx fur* and *Dermestes pisorum* (both of Linnaeus, 1758) in these respective genera so that the names as used by him are senior synonyms of *Ptinus* and *Bruchus* of Linnaeus (1767). Since several other coleopteran generic names as used by Geoffroy (1762) were suppressed by the ruling in Opinion 1754 in order to conserve junior names from Fabricius (1775) and Linnaeus (1767) (see BZN **51**: 62, para. (6)), the alternative proposals relating to the present case put forward by Dr F.C. Thompson (*U.S.D.A., c/o U.S. National Museum, Washington D.C., U.S.A.*) and Dr P.K. Tubbs (*Executive Secretary, ICZN, c/o The Natural History Museum, London, U.K.*), published respectively on BZN **48**: 146 and **48**: 147, were not proceeded with.

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **45**: 195, with amendments to the authorship and date of

Bruchus 'Müller, 1764' and *Mylabris* 'Müller, 1764' to Geoffroy (1762), and in BZN **48**: 143. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys, Willink

Negative votes — 1: Thompson.

No votes were received from Cogger, Halvorsen, Starobogatov, Trjapitzin and Uéno.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

BRUCHIDAE Latreille, 1802, *Histoire naturelle, générale et particulière, des crustacés et des insectes*, vol. 3, p. 192.

Bruchus Geoffroy, 1762, *Histoire abrégée des insectes qui se trouvent aux environs de Paris*, vol. 1, p. 163.

Bruchus Linnaeus, 1767, *Systema Naturae*, Ed. 12, vol. 1, part 2, p. 604.

cichorii, Meloe, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 419.

fur, Cerambyx, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 393.

Laria Scopoli, 1763, *Entomologia Carniolica*, p. 21.

Mylabris Fabricius, 1775, *Systema Entomologiae*, p. 261.

Mylabris Geoffroy, 1762, *Histoire abrégée des insectes qui se trouvent aux environs de Paris*, vol. 1, p. 266.

pisorum, Dermestes, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 356.

PTINIDAE Latreille, 1802, *Histoire naturelle, générale et particulière, des crustacés et des insectes*, vol. 3, p. 112.

Ptinus Linnaeus, 1767, *Systema Naturae*, Ed. 12, vol. 1, part 2, p. 565.

The following is the reference for the designation of *Dermestes pisorum* Linnaeus, 1758 as the type species of the nominal genus *Bruchus* Linnaeus, 1767; *Cerambyx fur* Linnaeus, 1758 as the type species of the nominal genus *Ptinus* Linnaeus, 1767; and *Meloe cichorii* Linnaeus, 1758 as the type species of the nominal genus *Mylabris* Fabricius, 1775:

Latreille, P.A. 1810. *Considérations générales sur l'ordre naturel des animaux composant les classes des crustacés, des arachnides et des insectes* ..., pp. 430, 427 and 430 (respectively).

OPINION 1810

Cryptophagus Herbst, 1792, *Dorcatoma* Herbst, 1792, *Rhizophagus* Herbst, 1793 and *Colon* Herbst, 1797 (Insecta, Coleoptera): conserved as the correct original spellings, and *Lyctus bipustulatus* Fabricius, 1792 ruled to be the type species of *Rhizophagus*

Keywords. Nomenclature; taxonomy; Coleoptera; *Cryptophagus*; *Dorcatoma*; *Rhizophagus*; *Colon*.

Ruling

(1) Under the plenary powers it is hereby ruled that:

(a) the correct original spellings of the following generic names are as shown:

(i) *Kryptophagus* Herbst, 1792: correctly *Cryptophagus*;

(ii) *Dorkatoma* Herbst, 1792: correctly *Dorcatoma*;

(iii) *Ryzophagus* Herbst, 1793: correctly *Rhizophagus*;

(iv) *Kolon* Herbst, 1797: correctly *Colon*;

(b) the designation by Westwood ([1838]) of *Lyctus bipustulatus* Fabricius, 1792 as the type species of *Rhizophagus* Herbst, 1793 is valid.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Cryptophagus* Herbst, 1792 (gender: masculine), type species by subsequent designation by Westwood ([1838]) *Dermestes cellaris* Scopoli, 1763;

(b) *Dorcatoma* Herbst, 1792 (gender: neuter), type species by monotypy *Dorkatoma* [sic] *dresdensis* Herbst, 1792;

(c) *Rhizophagus* Herbst, 1793 (gender: masculine), type species by subsequent designation by Westwood ([1838]) *Lyctus bipustulatus* Fabricius, 1792 as ruled in (1)(b) above;

(d) *Colon* Herbst, 1797 (gender: neuter), type species by subsequent designation by Thomson (1859) *Kolon* [sic] *viennensis* Herbst, 1797.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *cellaris* Scopoli, 1763, as published in the binomen *Dermestes cellaris* (specific name of the type species of *Cryptophagus* Herbst, 1792);

(b) *dresdensis* Herbst, 1792, as published in the binomen *Dorkatoma dresdensis* (specific name of the type species of *Dorcatoma* Herbst, 1792);

(c) *bipustulatus* Fabricius, 1792, as published in the binomen *Lyctus bipustulatus* (specific name of the type species of *Rhizophagus* Herbst, 1793);

(d) *viennensis* Herbst, 1797, as published in the binomen *Kolon viennensis* (specific name of the type species of *Colon* Herbst, 1797).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Kryptophagus* Herbst, 1792 (ruled in (1)(a)(i) above to be an incorrect original spelling of *Cryptophagus* Herbst, 1792);

(b) *Dorkatoma* Herbst, 1792 (ruled in (1)(a)(ii) above to be an incorrect original spelling of *Dorcatoma* Herbst, 1792);

(c) *Ryzophagus* Herbst, 1793 (ruled in (1)(a)(iii) above to be an incorrect original spelling of *Rhizophagus* Herbst, 1793);

(d) *Rhyzophagus* Gyllenhal, 1813 (an incorrect subsequent spelling of *Rhizophagus* Herbst, 1793);

(e) *Kolon* Herbst, 1797 (ruled in (1)(a)(iv) above to be an incorrect original spelling of *Colon* Herbst, 1797).

History of Case 2783

An application to conserve the spellings of *Cryptophagus* Herbst, 1792, *Dorcatoma* Herbst, 1792, *Rhizophagus* Herbst, 1793 and *Colon* Herbst, 1797, and to rule *Lyctus bipustulatus* Fabricius, 1792 to be the valid type species of *Rhizophagus*, was received from Dr Hans Silfverberg (*Zoological Museum, Helsinki University, Finland*) on 30 July 1990. After correspondence the case was published in BZN **51**: 21–24 (March 1994). Notice of the case was sent to appropriate journals.

A comment in support from Dr R.G. Booth (*International Institute of Entomology, c/o The Natural History Museum, London, U.K.*) was published in BZN **51**: 256–257 (September 1994). Dr Booth pointed out that '*Dorc.*' (probably an abbreviation for *Dorcatoma*) appeared in the text (p. 104) of Herbst's own (1792) work, as well as the spelling *Dorkatoma* which was used as a heading (pp. 103, 104, 105). However, adoption of the spelling *Dorcatoma* without reference to *Dorkatoma* by Paykull (1798) and subsequent authors did not meet the requirements for a first reviser selection (Article 24b of the Code). Dr Booth also mentioned that in 1799 Herbst indexed the names *Colon* and *Cryptophagus*.

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 22–23. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys (part), Thompson, Willink

Negative votes — none.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Štys voted for the conservation of the spellings of Herbst's generic names currently in use but did not agree with the type species fixation for *Rhizophagus*; he commented: 'I do not see why the Commission's plenary powers should be used to uphold the invalid designation of *Lyctus bipustulatus* Fabricius, 1792 as the type of *Rhizophagus*, rather than selecting its junior subjective synonym *R. bipunctatus* Herbst, 1793 which was one of the originally included species (para. 4 of the application)'.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

bipustulatus, *Lyctus*, Fabricius, 1792, *Entomologia Systematica emendata et aucta*, vol. 1, part 2, p. 503.

cellaris, Dermestes, Scopoli, 1763, *Entomologia Carniolica*, p. 16.
Colon Herbst, 1797, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 7, p. 224 (incorrectly spelled as *Kolon*).
Cryptophagus Herbst, 1792, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 4, p. 172 (incorrectly spelled as *Kryptophagus*).
Dorcatoma Herbst, 1792, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 4, p. 103 (incorrectly spelled as *Dorkatoma*).
Dorkatoma Herbst, 1792, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 4, p. 103 (an incorrect original spelling of *Dorcatoma*).
dresdensis, Dorkatoma, Herbst, 1792, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 4, p. 104.
Kolon Herbst, 1797, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 7, p. 224 (an incorrect original spelling of *Colon*).
Kryptophagus Herbst, 1792, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 4, p. 172 (an incorrect original spelling of *Cryptophagus*).
Rhizophagus Herbst, 1793, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 5, p. 18 (incorrectly spelled as *Ryzophagus*).
Rhyzophagus Gyllenhal, 1813, *Insecta suecica descripta. Classis I. Coleoptera sive Eleuterata*, vol. 1, part 3, p. 420.
Ryzophagus Herbst, 1793, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 5, p. 18 (an incorrect original spelling of *Rhizophagus*).
viennensis, Kolon, Herbst, 1797, *Natursystem aller bekannten in- und ausländischen Insekten*. Der Käfer, part 7, p. 225.

The following is the reference for the designation of *Dermestes cellaris* Scopoli, 1763 as the type species of the nominal genus *Cryptophagus* Herbst, 1792, and *Lyctus bipustulatus* Fabricius, 1792 as the type species of the nominal genus *Rhizophagus* Herbst, 1793:
Westwood, J.O. [1838]. *Synopsis of the genera of British insects*, p. 13. Published with *An introduction to the modern classification of insects ...*, vol. 1, part 1. Pp. 1–48.

The following is the reference for the designation of *Kolon* [sic] *viennensis* Herbst, 1797 as the type species of the nominal genus *Colon* Herbst, 1797:
Thomson, C.G. 1859. *Skandinaviens Coleoptera, synoptiskt bearbetade*, vol. 1, p. 60.

OPINION 1811

COLYDIIDAE Erichson, 1842 (Insecta, Coleoptera): given precedence over CERYLONIDAE Billberg, 1820 and ORTHOCERINI Blanchard, 1845 (1820); and *Cerylon* Latreille, 1802: *Lyctus histeroides* Fabricius, 1792 designated as the type species

Keywords. Nomenclature; taxonomy; Coleoptera; COLYDIIDAE; CERYLONIDAE; ORTHOCERINI; *Cerylon*.

Ruling

(1) Under the plenary powers:

(a) it is hereby ruled that the family-group name COLYDIIDAE Erichson, 1842 and other family-group names based on *Colydium* Fabricius, 1792 are hereby given precedence over ORTHOCERIDAE Blanchard, 1845 (1820) and other family-group names based on *Orthocerus* Latreille, 1796, and over CERYLONIDAE Billberg, 1820 and other family-group names based on *Cerylon* Latreille, 1802;

(b) all previous fixations of type species for the nominal genus *Cerylon* Latreille, 1802 are hereby set aside and *Lyctus histeroides* Fabricius, 1792 is designated as the type species.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Colydium* Fabricius, 1792 (gender: neuter), type species by subsequent designation by Latreille (1810) *Bostrichus elongatus* Fabricius, 1787;

(b) *Cerylon* Latreille, 1802 (gender: neuter), type species by designation under the plenary powers in (1)(b) above *Lyctus histeroides* Fabricius, 1792;

(c) *Orthocerus* Latreille, 1796 (gender: masculine), type species by subsequent monotypy by Latreille (1807) *Tenebrio hirticornis* De Geer, 1775 (a junior subjective synonym of *Dermestes clavicornis* Linnaeus, 1758).

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *elongatus*, Fabricius, 1787, as published in the binomen '*Bostricilus*' [recte *Bostrichus*] *elongatus*, specific name of the type species of *Colydium* Fabricius, 1792;

(b) *histeroides*, Fabricius, 1792, as published in the binomen *Lyctus histeroides*, specific name of the type species of *Cerylon* Latreille, 1802;

(c) *clavicornis*, Linnaeus, 1758, as published in the binomen *Dermestes clavicornis* (senior subjective synonym of *Tenebrio hirticornis* De Geer, 1775, the type species of *Orthocerus* Latreille, 1796).

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:

(a) COLYDIIDAE Erichson, 1842 (type genus *Colydium* Fabricius, 1792) with the endorsement that it and other family-group names based on *Colydium* are to be given precedence over CERYLONIDAE Billberg, 1820 (type genus *Cerylon* Latreille, 1802) and other family-group names based on *Cerylon*, and over ORTHOCERINI Blanchard, 1845 (1820) (type genus *Orthocerus* Latreille, 1796)

and other family-group names based on *Orthocerus*, whenever their type genera are placed in the same family-group taxon;

(b) CERYLONIDAE Billberg, 1820 (type genus *Cerylon* Latreille, 1802) with the endorsement that it and other family-group names based on *Cerylon* are not to be given priority over COLYDIIDAE Erichson, 1842 (type genus *Colydium* Fabricius, 1792) and other family-group names based on *Colydium* whenever their type genera are placed in the same family-group taxon;

(c) ORTHOCERINI Blanchard, 1845 (1820) (type genus *Orthocerus* Latreille, 1796) with the endorsement that it and other family-group names based on *Orthocerus* are not to be given priority over COLYDIIDAE Erichson, 1842 (type genus *Colydium* Fabricius, 1792) and other family-group names based on *Colydium* whenever their type genera are placed in the same family-group taxon;

(5) The name SARROTRIIDAE Billberg, 1820 (type genus *Sarrotrium* Illiger, 1798) is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (replaced before 1961 as a name based on a junior generic synonym).

History of Case 2713

An application for the conservation of the family-group name COLYDIIDAE Erichson, 1842 by giving it precedence over CERYLONIDAE Billberg, 1820 and ORTHOCERINI Blanchard, 1845 (1820), and for the established usage of *Lyctus histeroides* Fabricius, 1792 as the type species of *Cerylon* Latreille, 1802 to be maintained, was received from Dr Hans Silfverberg (*Zoological Museum, Helsinki University, Finland*) on 23 February 1989. After correspondence the case was published in BZN **51**: 17–20 (March 1994). Notice of the case was sent to appropriate journals.

Support for the application was received from Dr R.G. Booth (*International Institute of Entomology, c/o The Natural History Museum, London, U.K.*).

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 18–19. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Bouchet (part), Cocks, Corliss, Dupuis, Hahn, Halvorsen, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Thompson, Willink

Negative votes — 4: Heppell, Holthuis, Martins de Souza and Štys.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Bouchet voted in favour of designating *Lyctus histeroides* as the type species of *Cerylon* and placing all the generic and specific names involved in the case on Official Lists, but against giving precedence to the family-group name COLYDIIDAE. Voting against, Heppell commented: 'I can find no evidence that any of the names 'Cerylonides' Billberg, 1820, 'Sarrotriides' Billberg, 1820 or 'Orthocérites' Blanchard, 1845 have any status in zoological nomenclature. They are no more than vernacular names. For such a name to be available under Article 11f(iii) of the Code it must have been not only latinized by later authors but also 'generally accepted as ... dating from that first publication as a vernacular name'. Here, on the contrary, CERYLONIDAE seems to have been universally regarded as established by Erichson (1845, as

CERYLINI), and ORTHOCERINI by Reitter (1882). Consequently these names are not senior to COLYDIIDAE Erichson, 1842 and are no threat to its stability. I agree with the designation of *Lyctus histeroides* as the type species of *Cerylon*'. Martins de Souza commented: 'Since Crowson's (1955) classification of the Coleoptera, CERYLONIDAE has been included in the CUCUJOIDEA and COLYDIIDAE in the TENEBRIONOIDEA. This classification has been adopted by a number of very recent authors, which indicates that the COLYDIIDAE and CERYLONIDAE are not included in the same family-group'. Štys commented: 'I cannot endorse the proposal to give COLYDIIDAE precedence and feel that priority should apply whenever the names COLYDIIDAE, CERYLONIDAE and ORTHOCERINI compete; only the precedence of CERYLONIDAE and ORTHOCERINI should be decided by the Commission. I agree that COLYDIIDAE is the best known and widely used name. However, all the names have been frequently used in both the classical and modern literature and none of them has been 'rediscovered'. I cannot see that the 'stability of nomenclature is threatened', only that coleopterists have ignored the principle of priority. A quite different situation obtains with SARROTRIIDAE and I fully support placing the name on the Official Index'.

Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Cerylon Latreille, 1802, *Histoire naturelle générale et particulière des crustacès et des insectes*, vol. 3, p. 205.

CLRYLONIDAE Billberg, 1820, *Enumeratio Insectorum in Museo Gust. Joh. Billberg*, p. 47.

clavicornis, *Dermestes*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 355.

COLYDIIDAE Erichson, 1842, *Archiv für Naturgeschichte*, **8**: 213.

Colydium Fabricius, 1792, *Entomologia Systematica*, vol. 1, part 2, p. 495.

elongatus, *Bostrichus*, Fabricius, 1787, *Mantissa Insectorum*, vol. 1, p. 36.

histeroides, *Lyctus*, Fabricius, 1792, *Entomologia Systematica*, vol. 1, part 2, p. 504.

ORTHOCERINI Blanchard, 1845 (1820), *Histoire des insectes ... comprenant une nouvelle classification fondée sur leurs rapports naturels*, vol. 2, p. 29.

Orthocerus Latreille, 1796, *Précis des caractères génériques des insectes, disposés dans un ordre naturel*, p. 16.

SARROTRIIDAE Billberg, 1820, *Enumeratio Insectorum in Museo Gust. Joh. Billberg*, p. 9.

The following is the reference for the designation of *Bostrichus elongatus* Fabricius, 1787 as the type species of the nominal genus *Colydium* Fabricius, 1792:

Latreille, P.A. 1810. *Considérations générales sur l'ordre naturel des animaux composant les classes des crustacés, des arachnides et des insectes*, p. 431.

The following is the reference for the fixation of *Tenebrio hirticornis* De Geer, 1775 as the type species of the nominal genus *Orthocerus* Latreille, 1796:

Latreille, P.A. 1807. *Genera Crustaceorum et Insectorum*, vol. 2, p. 172.

OPINION 1812

ELMIDAE Curtis, 1830 (Insecta, Coleoptera): conserved as the correct original spelling, and the gender of *Elmis* Latreille, 1802 ruled to be feminine

Keywords. Nomenclature; taxonomy; Coleoptera; riffle water beetles; ELMIDAE; *Elmis*.

Ruling

(1) It is hereby ruled that:

(a) the gender of the generic name *Elmis* Latreille, 1802 is feminine;

(b) for the purposes of Article 29 of the Code the stem of the generic name *Elmis* Latreille, 1802 is ELM-.

(2) The name *Elmis* Latreille, 1802 (gender: feminine, as ruled in (1)(a) above), type species by monotypy *Elmis maugetii* Latreille, 1802, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *maugetii* Latreille, 1802, as published in the binomen *Elmis maugetii* (specific name of the type species of *Elmis* Latreille, 1802), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name ELMIDAE Curtis, 1830 (type genus *Elmis* Latreille, 1802), spelling ruled in (1)(b) above, is hereby placed on the Official List of Family-Group Names in Zoology.

History of Case 2861

An application for the conservation of the family-group name ELMIDAE Curtis, 1830 as the correct original spelling, and for the gender of the generic name *Elmis* Latreille, 1802 to be ruled as feminine, was received from Dr M.A. Jäch (*Naturhistorisches Museum, Wien, Austria*) on 28 August 1992. After correspondence the case was published in BZN **51**: 25–27 (March 1994). Notice of the case was sent to appropriate journals.

A comment in support from Dr G.N. Foster (*The Balfour-Browne Club, Ayr, Scotland, U.K.*) was published in BZN **51**: 281 (September 1994). Support was also received from Dr Hans Silfverberg (*Zoological Museum, Helsinki University, Finland*).

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 26. At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys, Thompson, Willink

Negative votes — none.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

ELMIDAE Curtis, 1830, *British entomology*, vol. 7, pl. 294.
Elmis Latreille, 1802, *Histoire naturelle des fourmis*, p. 398.
maugetii, *Elmis*, Latreille, 1802, *Histoire naturelle des fourmis*, p. 400.

OPINION 1813

Alestes Müller & Troschel, 1844 (Osteichthyes, Characiformes): conserved

Keywords. Nomenclature; taxonomy; Osteichthyes; Characiformes; freshwater fish; *Alestes*; Africa.

Ruling

(1) Under the plenary powers the name *Myletes* Cuvier, 1814 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Alestes* Müller & Troschel, 1844 (gender: masculine), type species by subsequent designation by Jordan (1919) *Salmo niloticus* Linnaeus, 1758 (a junior subjective synonym of *Cyprinus dentex* Linnaeus, 1758), is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *dentex* Linnaeus, 1758, as published in the binomen *Cyprinus dentex* (senior subjective synonym of the specific name of *Salmo niloticus* Linnaeus, 1758, the type species of *Alestes* Müller & Troschel, 1844, by the first reviser action of Valenciennes, 1849), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Myletes* Cuvier, 1814, as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

(5) The name *hasselquistii* Cuvier, 1818, as published in the binomen *Myletes hasselquistii*, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology (a junior objective synonym of *Cyprinus dentex* Linnaeus, 1758).

History of Case 2835

An application for the conservation of the generic name *Alestes* Müller & Troschel, 1844 was received from Drs Jacques Géry and Volker Mahnert (*c/o Muséum d'Histoire Naturelle, Genève, Switzerland*) on 25 October 1991. After correspondence the case was published in BZN **51**: 35–40 (March 1994). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the application sought to conserve the generic name *Alestes* Müller & Troschel, 1844, which had been used for 150 years for a group of African freshwater fishes, by the suppression of the unused senior subjective synonym *Myletes* Cuvier, 1814. Some of the species included in *Alestes* were of economic importance.

The name *Myletes* was proposed by Cuvier (1814) for the single African species *Salmo dentex* Hasselquist, for which he cited *S. niloticus* Forsskål, 1775 as a synonym. Cuvier did not give a date for Hasselquist's name. Hasselquist's (1757) work *Iter palestinum* ..., in which the name first appeared, was pre-Linnaean and the (1762) German translation has been rejected by the Commission. The names *Cyprinus dentex* and *Salmo niloticus* were made available by Linnaeus (1758, pp. 325 and 312) for supposedly different species from the Nile, but they have been recognised as synonyms since the time of Forsskål (1775). *C. dentex* Linnaeus, 1758 was based on *S. dentex* Hasselquist, 1757, and Valenciennes (1849) acted as first

reviser in giving it precedence over *S. niloticus* Linnaeus, 1758. The type species of *Myletes* was *C. dentex* Linnaeus by monotypy. In 1816 Cuvier described *Myletes* with the single species *C. dentex* Linnaeus, and cited *S. dentex* Hasselquist and *S. niloticus* Forsskål as synonyms. A specimen of *C. dentex* in the Stockholm Museum, probably that described by Hasselquist, has been identified as the type (Fernholm & Wheeler, 1983).

In his original (1814) description of *Myletes* Cuvier referred to American species but did not name them. In 1818 Cuvier included four new American nominal species in the genus. Subsequently *Myletes* was treated as a South American genus and Jordan (1917), followed with doubt by Eschmeyer & Bailey (1990), erroneously gave the South American *M. rhomboidalis* Cuvier, 1818 as the type species. Later Jordan (1920) corrected his error.

Müller & Troschel (1844) described the genus *Alestes* for two African species, the first being *A. niloticus*, with *Cyprinus dentex* Linnaeus, *Salmo dentex* Hasselquist, *Characinus niloticus* Geoffroy Saint-Hilaire and *Myletes hasselquistii* Cuvier cited as synonyms. There was no type species until Jordan (1919) designated '*Salmo* [recte *Characinus*] *niloticus* Geoffroy Saint-Hilaire, 1809' as the type. As mentioned above, the name *Salmo niloticus* was made available by Linnaeus (1758, p. 312), and this was therefore the type species of *Alestes* by Jordan's designation. Proposals (2) and (3) on BZN **51**: 38 were amended on the voting paper in this respect. As also explained above, the valid specific name is that of *Cyprinus dentex* Linnaeus, 1758, and indeed Geoffroy (1809) gave this as being his *Characinus niloticus*. Thus *Myletes* and *Alestes* are formally only subjective synonyms even though based on the same taxon.

Müller & Troschel (1844) retained *Myletes* for a number of South American species. The usage of *Alestes* for African species and *Myletes* for South American taxa was followed by most authors and only a few recognised *Alestes* as a junior synonym of *Myletes*.

The four South American nominal species included in *Myletes* by Cuvier (1818) have since been placed elsewhere and the name *Myletes* has not been used for either African or South American taxa for 80 years. It was proposed that it be suppressed to conserve the much-used *Alestes* Müller & Troschel, 1844 (and the family name ALESTIDAE Hoedeman, 1951).

The specific name of *Myletes hasselquistii*, proposed b Cuvier (1818) as an unnecessary replacement for *dentex* as used by Hasselquist and Linnaeus, has not generally been used and it was proposed that it be placed on the Official Index.

Decision of the Commission

On 1 December 1994 the members of the Commission were invited to vote on the proposals published in BZN **51**: 38, with the replacement of *Characinus niloticus* Geoffroy Saint-Hilaire, 1809 by *Salmo niloticus* Linnaeus, 1758 in Proposals (2) and (3). At the close of the voting period on 1 March 1995 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Macpherson, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Štys, Thompson, Willink

Negative votes — 1: Lehtinen.

Mahnert abstained.

No votes were received from Cogger, Starobogatov, Trjapitzin and Uéno.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:
Alestes Müller & Troschel, 1844, *Archiv für Naturgeschichte*, **10**(1): 88.
dentex, *Cyprinus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 325.
hasselquistii, *Myletes*, Cuvier, 1818, *Mémoires du Muséum d'Histoire Naturelle*, **4**: 449.
Myletes Cuvier, 1814, *Bulletin des Sciences, par la Société Philomatique de Paris*, **1814**: 75.

The following is the reference for the designation of *Salmo niloticus* Linnaeus, 1758 as the type species of the nominal genus *Alestes* Müller & Troschel, 1844:
Jordan, D.S. 1919. *The genera of fishes*; part 2, p. 221.

The following is the reference for the first reviser selection of the precedence of *Cyprinus dentex* over *Salmo niloticus*, both of Linnaeus (1758):
Valenciennes, A. 1849. *In* Cuvier, G. & Valenciennes, A., *Histoire naturelle des poissons*, vol. 22, p. 185.

OPINION 1814

Catharacta antarctica lonnbergi Mathews, 1912 (currently *Catharacta skua lonnbergi*) and *Catharacta skua hamiltoni* Hagen, 1952 (Aves, Charadriiformes): subspecific names conserved

Ruling

(1) Under the plenary powers the subspecific name *madagascariensis* Bonaparte, 1856, as published in the trinomen *Stercorarius antarcticus madagascariensis*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *lonnbergi* Mathews, 1912, as published in the trinomen *Catharacta antarctica lönnbergi*;

(b) *hamiltoni* Hagen, 1952, as published in the trinomen *Catharacta skua hamiltoni*.

(3) The name *madagascariensis* Bonaparte, 1856, as published in the trinomen *Stercorarius antarcticus madagascariensis* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2816

An application for the conservation of the subspecific name of *Catharacta antarctica lonnbergi* Mathews, 1912 was received from Drs J.-F. Voisin and C. Voisin (*Muséum National d'Histoire Naturelle, Paris, France*), W.J. Bock (*Columbia University in the City of New York, N.Y., U.S.A.*) and M. Théry (*C.N.R.S., U.R.A., Muséum National d'Histoire Naturelle, Brunoy, Paris, France*) on 16 April 1991. After correspondence the case was published in BZN **50**: 48–51 (March 1993). Notice of the case was sent to appropriate journals.

A comment from Drs W.R.P. Bourne (*Aberdeen University, Aberdeen, U.K.*), P.R. Colston (*The Natural History Museum, Tring, Hertfordshire, U.K.*) & R.W. Furness (*Glasgow University, Glasgow, U.K.*), published in BZN **50**: 294–295 (December 1993), supported the suppression of the subspecific name of *Stercorarius antarcticus madagascariensis* Bonaparte, 1856 but identified the holotype of *madagascariensis* as probably *Catharacta skua hamiltoni* Hagen, 1952 (p. 135); they proposed (BZN **50**: 295) that the name *hamiltoni* should also be placed on the Official List. In a reply, published in BZN **51**: 52–53 (March 1994), the authors of the application agreed to this proposal. The additional proposal was included on the voting paper.

It was noted on the voting paper that *Catharacta skua hamiltoni* was fully described and documented by Hagen (1952, pp. 135–145). Nine specimens were collected from the islands of Tristan da Cunha, Nightingale and Inaccessible and deposited in the Zoological Museum of Oslo.

Decision of the Commission

On 1 September 1994 the members of the Commission were invited to vote on the proposals published in BZN **50**: 50 and 295. At the close of the voting period on 1 December 1994 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet (part), Cocks, Corliss, Hahn, Heppell (part), Holthuis, Kabata, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Thompson, Trjapitzin, Willink

Negative votes — 2: Cogger and Lehtinen.

No votes were received from Halvorsen and Uéno.

Dupuis, Kraus and Ride were on leave of absence.

Cogger commented that he would have preferred to give *lonnbergi* or *hamiltoni* precedence over *madagascariensis*, rather than suppressing the last name. Bouchet abstained on the additional proposal to place *C. s. hamiltoni* on the Official List. Heppell commented: 'I vote for the application but as I see no reason to seek the addition of *hamiltoni* to the Official List, I am voting against that additional proposal'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

hamiltoni, *Catharacta skua*, Hagen, 1952, *Results of the Norwegian Scientific Expedition to Tristan da Cunha 1937–1938*, **20**: 135.

lonnbergi, *Catharacta antarctica*, Mathews, 1912, *Novitates Zoologicae*, **18**(3): 212.

madagascariensis, *Stercorarius antarcticus*, Bonaparte, 1856, *Conspectus generum avium*, vol. 2, p. 207.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

On the proposal to remove the homonymy between BRACHYPTERINAE Erichson, [1845] (Insecta, Coleoptera) and BRACHYPTERINAE Zwick, 1973 (Insecta, Plecoptera), and proposed precedence of KATERETIDAE Ganglbauer, 1899 over BRACHYPTERINAE Erichson, [1845]. P.A. Audisio; A.F. Newton 179
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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 52, part 3 (pp. 225–288) 28 September 1995

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 52, part 2 (published on 30 June 1995). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Holotrepis herminieri* Duméril & Bibron, 1837 (currently *Leiocephalus herminieri*; Reptilia, Sauria): proposed conservation of the specific name. (Case 2976). H.M. Smith & E.L. Bell.

(2) *Arca pectunculoides* Scacchi, 1834 and *A. philippiana* Nyst, 1848 (Mollusca, Bivalvia): proposed conservation of usage. (Case 2977). C. Salas & S. Gofas.

(3) *Plumularia* Lamarck, 1816 and *Kirchenpaueria* Jickeli, 1883 (Cnidaria, Hydrozoa): proposed conservation of usage by the designation of *Sertularia setacea* Linnaeus, 1758 as the type species of *Plumularia*. (Case 2978). D.R. Calder & P.F.S. Cornelius.

(4) *Gryllus insubricus* Scopoli, 1786 and *G. patruelis* Herrich-Schaeffer (currently *Acrotylus insubricus* and *A. patruelis*; Insecta, Orthoptera): proposed conservation of usage of the specific names. (Case 2979). M. La Greca.

(5) *Procoptodon* Owen, 1874 (Mammalia, Marsupialia): proposed conservation of the generic name and the specific names of *P. rapha* Owen, 1874 and *P. pusio* Owen, 1874. (Case 2980). A.C. Davis & W.D.L. Ride.

(6) *Fringilla hispaniolensis* Temminck, 1820 (currently *Passer hispaniolensis* or *P. domesticus hispaniolensis*; Aves, Passeriformes): proposed precedence of the specific name over that of *F. italiae* Vieillot, 1817. (Case 2982). W.J. Bock & J. Haffer.

(7) ACHATINELLIDAE Gulick, 1873 and *Achatinellastrum* Pfeiffer, 1854 (Mollusca, Gastropoda): proposed conservation. (Case 2983). R.H. Cowie & N.L. Evenhuis.

(8) *Monograptus riccartonensis* Lapworth, 1876 (Graptolithina): proposed designation of a neotype, (Case 2984). D.K. Loydell.

(9) *Myrmecaelurus fedtschenkoi* McLachlan, 1875 (currently *Lopezus fedtschenkoi*; Insecta, Neuroptera): proposed conservation of the specific name. (Case 2985). V.A. Krivokhatsky.

(10) *Dasineura* Rondani, 1840 (Insecta, Diptera): proposed designation of *Tipula sisymbrii* Schrank, 1803 as the type species. (Case 2986). R.J. Gagné, K.M. Harris, M. Skuhravá, M. Solinas & E. Sylvén.

(11) *Belemnosepia* Buckland & Agassiz in Buckland, 1836 (Mollusca, Cephalopoda): proposed suppression. (Case 2987). T. Engeser & D.T. Donovan.

(12) *Euchroeus* Latreille, 1809 and *Chrysis purpurata* Fabricius, 1787 (currently *E. purpuratus*; Insecta, Hymenoptera): proposed conservation of usage. (Case 2988). M. Pavesi & F. Strumia.

(13) *Galatheascus striatus* Boschma, 1929 (Crustacea, Rhizocephala): proposed confirmation of holotype as name-bearing type. (Case 2989). L.B. Holthuis.

(14) *Disparalona* Fryer, 1968 (Crustacea, Branchiopoda): proposed conservation. (Case 2900). G. Fryer.

(15) *Parapronoe crustulum* Claus, 1879 (Crustacea, Amphipoda): proposed conservation of the specific name. (Case 2992). W. Zeidler.

(d) *Ruling of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin.*

Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals – a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 x 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to the present. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington, D.C. 20560, U.S.A. The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment should accompany orders.

The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., c/o NHB Stop 163, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France), Prof. A. Minelli (Italy) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

Fourth Edition of the International Code of Zoolgical Nomenclature

A discussion Draft of a new (fourth) edition of the Code is now available. Copies are being sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution.

Discussion Draft of the Fourth Edition of the *International Code of Zoological Nomenclature*

Comment on endings of species-group epithets (Articles 31, 32 and 48)

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Introduction

This comment is made to help zoologists to understand more clearly the options open to the Commission and the Section of Zoological Nomenclature of the International Union of Biological Sciences when they come to review the drafts of Articles 31 (Endings of species-group epithets), 32 (Original spellings), and 48 (Change of generic assignment) for the 4th Edition. Zoologists are urged to provide written comments on the options that the Commission and the Section can take into account at that time.

There is need for balanced input from zoologists so that options may be reviewed on the basis of wide informed opinion. Two of these are given in the Discussion Draft (Articles 31b(ii), 32c and 48). The issue arises as a consequence of the decision of the Commission that the Editorial Committee was to provide in the Discussion Draft that the mandatory changes in spelling to maintain agreement between the parts of a binomen or trinomen would no longer be required when changes in generic combination are made.

The example presented in the Discussion Draft to illustrate the matter is that of *Psittacus chrysostomus* Kuhl, 1820. When transferred to *Neophema* Salvadori, 1891, under the current Code (Articles 31b, 34b) a mandatory change in spelling to *Neophema chrystostoma* is required to maintain agreement in gender between the parts of the name. The latter combination (and spelling) resulting from the mandatory change has been in universal use for a considerable period.

Options

There are four principal options open for the treatment of already available adjectival or participial species-group epithets of which the spelling has been changed to meet the requirements of the current Articles 31 and 34, as in the example given. Variants of several of these four are also possible. The further possibility that all generic names might be deemed to have a common gender and that epithets be brought into agreement with that is not included. The principal options are:

1. To maintain the most common current spelling in use. *Advantage*: This would cause least upset to spellings in the existing literature (especially the non-taxonomic literature); it would not require the original literature to be consulted to ascertain the original ending (the original literature would still be consulted to confirm other aspects of spelling, date of publication, etc.). *Disadvantage*: The solution does not provide for names which have no completely stable generic association; many (possibly most) names are not in common use but have various generic allocations in the specialist literature and in such cases of no common use, a decision by users

would have to be made whether, of those uses, the most recent use would apply; disputation is likely to arise in the case of some names as to which of several is in 'most common use'; with the adoption of parts of the proposed *List of Available and Potentially Valid Names* (see Articles 77 and 78 in the Discussion Draft) the spellings of such names would differ from those in the List, which will record the original spellings.

2. To maintain the most common current spelling in use so long as the current generic allocation remains unchanged. *Advantage*: As in 1 above, but when a taxonomic change in genera results in a new form of the name becoming introduced into the non-taxonomic literature, opportunity would be taken to complete the change to the original spelling. *Disadvantage*: The same as the first three disadvantages given in 1 above.

3. To adopt the first reviser principle, namely that the first spelling used after the adoption of the 4th Edition would become invariable. *Advantage*: The rule would be clear-cut and is widely applied in nomenclature in lectotype selection, etc. *Disadvantage*: Instability of spelling would prevail until all usages had been ascertained in all literature published after the new edition and the first had been adopted.

4. To revert to the original spelling. *Advantage*: The provision would be applied in the same manner as that of confirming spellings, places of publication, date, etc.; there would be no doubt as to the correct spelling of any name. *Disadvantage*: Endings of many names in common use would be changed.

Comment

In the Discussion Draft, in this matter alone, the Editorial Committee thought it useful to present drafts of two options for consideration (Options 2 and 4 above).

The zoological community is asked to consider the matter carefully and assist the Commission with factual statements in support of a preferred outcome based on names in use in their own fields.

When preparing the Discussion Draft the Editorial Committee was exposed to strongly expressed opinions which caused it to draft the options which have been circulated. A decision must be made to adopt an outcome in the eventual Code that will result in stable and universally accepted spellings. It is hoped that zoologists will comment in such a way as to lead the Commission to adopt a solution that is easy to apply, is productive of least uncertainty for future users of names, and is least upsetting in the longer term.

Comment on availability of new names and need for ratification in the *Zoological Record* (Article 11b)

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1. By far the most perturbing aspect of the new draft Code is the proposal (Article 11b) that the availability of new animal names must be ratified by their appearance

as such in the *Zoological Record* (*ZR*) within five years of their first publication. Prima facie this might seem an attractive idea to some zoologists because of the latent possibility of it leading to a register of names — ones we are allowed to use in taxonomy as distinct from those we can forget all about. It is essential, however, that we differentiate between what might be taxonomically desirable and what is nomenclaturally ill-advised. In my view the proposal contained in Article 11b is unwise, impractical and potentially damaging to the future stability of names.

2. It is suggested in the draft that names first published after 1996 will be available (subject to the usual availability criteria) from their first publication but will lose this status — and therefore become unusable as valid names — if unrecorded (*as new names*) in *ZR* within the next five years, after which they will be deemed not to be available from the original publication.

3. This notion introduces into animal taxonomy two principles that have not existed previously but which are implicit in the new draft Code: secondary responsibility and temporary availability.

(a) *Secondary responsibility*. By this I mean the shifting onto the shoulders of the indexers/recorders for *ZR* the responsibility for whether new names shall ultimately live or die. Hitherto the author of a new name has been responsible for its availability, for ensuring that it satisfies the applicable criteria. That is as it should be: the author is the zoologist making the scientific judgement (right or wrong) that a new name is required for a supposedly new taxon. There are many reasons why a new name might fail to be recorded in *ZR* — it might, for example, be missed because it appeared in a very obscure work or an unmonitored journal or there might simply be an inadvertent oversight during the scanning of an article — yet this *bibliographic* database will (under the draft Article 11b) become implicitly blameworthy whenever a name has to be deprived of its availability under the five-year provision. It is inappropriate that *ZR* recorders, who cannot have knowledge of a taxon represented by a particular name, should become the unwitting arbiters of its nomenclatural fate and its taxonomic usability. Such matters should remain, as now, the responsibility of research zoologists (the primary community), aided if necessary by the Commission.

(b) *Temporary availability*. It is hard to see how this new concept can contribute to the stability of names and their authorship and dating. Consider, for example, the name of a new species of parasite, pest or disease vector. The literature can quickly burgeon for such a name, say for one born in a biomedical journal outside the monitoring scope of *ZR* and unlikely to be conventionally captured for the *ZR* database. Are we to abandon the use of such an important name on the technicality that it had failed to appear in *ZR* within the five-year time frame? And if we do, what then? A Commission case to validate it? The proposal of yet another name? The bringing into use of some little known later-proposed name that is a synonym but is available because recorded in *ZR* within its own five-year time frame? The Article 11b proposal not only carries with it much potential for instability and more work by the Commission to sort out 'temporary availability' problems but also implies a future heavier burden on the conscientious cataloguer. Names do not simply go away. We can safely predict that more annotation will be needed than in the past. For example, to explain a situation we might need an entry such as '*albus* Bloggs, 1999 (*Xus*) ... [Availability accepted, five-year *Zoological Record* ratification period unexpired]', or

'*albus* Bloggs, 1999: ratified *Zoological Record*, 2004 ...]', or '*albus* Bloggs, 1999 (*Xus*) ... [Unavailable under Article 11b, not recorded in *Zoological Record* before 2005]'. On every ground, the concept of temporary availability subject to *ZR* ratification is unwise.

4. *Practicalities.* The Article 11b and its Recommendations prompt many practical questions bearing on the viability of the proposal, for example:

(a) Can the date for a new name in the original publication and for its recording in *ZR* be determined with sufficient accuracy?

Answer: almost certainly not.

Day-dating of *both* will be essential: a name first published on 29 November 1998 will become permanently available if recorded on 28 November 2003 but not on 30 November 2003.

(b) What does 'recorded as such in the *Zoological Record*' mean?

Answer: unexplained and uncertain.

ZR can be searched in three formats: conventional printed copy, as compact disc and electronically online. The print version is issued annually in December and distributed by its publisher (Biological Abstracts Inc.) from Philadelphia, reaching most library shelves the following February-April, but the electronic database from which it derives is updated at intervals through the previous year. Which medium does the Editorial Committee have in mind? A zoologist searching online would find a new name recorded earlier than a zoologist dependent on the print version. There would probably be situations where the same name is recorded on the searchable electronic database within the five years but not issued in the printed *ZR* until after five years.

(c) Is it realistic to expect *ZR* to find all new names from all sources?

Answer: no.

No biological database is ever 100% comprehensive within its scope. *ZR* achieves miracles but does not, and cannot realistically be expected to, find every new animal name. Notwithstanding the proposed Recommendation 11A (advising that authors should draw the attention of *ZR* to any new name published), the finding and recording of new names in *ZR* is bound to remain primarily dependent on its own search procedures. These involve monitoring a portfolio of (currently) some 6500 periodicals and rely on the continuing accessibility of these periodicals. The number of periodicals that ideally should be scanned is growing as taxonomy moves further from its morphological base and as more countries start new journals in relevant fields (the biomedical and molecular fields, for example), while financial constraints affect libraries everywhere — to such an extent that even the periodicals base at the British Library (the main document source for *ZR* database production) has begun to shrink. Most taxonomists have had the experience of finding overlooked names in works that were for a long time unknown to them. To expect *ZR* to unearth every new name in every publication is quite unrealistic.

(d) Should the Code favour those with ready access to *ZR*?

Answer: no.

An extension of the *ZR* user and subscriber base is highly desirable but the continuing reality is likely to be that (say) an isolated worker studying bloodsucking arthropods in a provincial academy in China is much less likely to have *ZR* access than somebody studying such organisms in a research institute or museum in Europe

or North America. If permanent availability becomes *ZR*-dependent, low-level awareness of or access to this database in the presently less developed world will contribute to instability. Workers in such areas are likely to persist with the nomenclature known to them locally regardless of anything the Code might require.

5. *Conclusion.* In the light of the comments here made I am against the course of action proposed in draft Article 11b concerning the availability of new names and hope that other zoologists will join with me in urging the Editorial Committee to think again on this very important issue.

Comment on gender of genus-group names and on species-group epithets (Articles 30 and 31)

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I would like to register my strong objections to the introduction of linguistic laxity into the draft Code. We all know that modern education does not produce classical scholars. I myself have only smatterings of Latin and no Greek at all, yet I have never had any difficulties with forming new binomina and I have published more than a hundred of them. Those who have no knowledge of classical languages can easily consult one of the many source books that provide instructions on name formation (as I write I have in front of me an excellent compendium that would enable anybody to form a correct binomen: R.W. Brown (1991), *Composition of Scientific Words*, Smithsonian Publications). The proposals do not abolish Latin and Greek, they only bastardise them and lower the standards. People will have to continue to use classical languages, but they will simply be free to use them incorrectly. Systematics is a discipline on the defensive these days as a supposedly obsolete branch of science ('surely all this was done in the 19th century?'). Lower standards will have further unfavourable impact on its standing in the scientific community and in the eyes of those who decide on apportioning support.

'Castrating' genera (Article 30) is a retrograde step. The proposal (Article 31) that specific names should be returned to their original gender form, even if grammatically incorrect, is absurd. Talk about instability! The suggestion that corrected endings should be retained in cases of 'existing usage' is vague and leaves the door open to all kinds of difficulties.

Comment on need for stability in names (Article 79c)

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It seems to me that the strong case for stability made in the covering explanatory notes by Kraus & Ride is not adequately conveyed by the present form of

Article 79c in the Discussion Draft. I suggest that a Subsection (vii) be added paraphrasing the third paragraph of those explanatory notes, perhaps more or less as follows:

> 'Stability in name application and form, consistent with taxonomy, is of paramount importance irrespective of any priority or linguistic consideration. Stability must take precedence over priority and linguistics, neither of which is an end in itself. No scientific purpose is served by changing names for purely formal reasons, if doing so causes significant confusion in any biological context (whether specialist or non-specialist). The present Article is intended to ensure that names in present use remain valid, or can easily be validated.'

The Preamble has not been included in the Discussion Draft, but I do think a clarification of the Code's role in biology should be in the eventual text, noting the importance of nomenclatural stability in the context of non-taxonomic as well as taxonomic literature. Taxonomists are the guardians of biological nomenclature for the benefit not only of themselves, but far more importantly for the common man and the numerous biologists of other disciplines whatever those may be: ecology, conservation, genetics, evolution, education, medicine, organismic, cell or molecular biology, etc. Educated non-taxonomists depend on taxonomists to ensure stability of nomenclature, insofar as it is consistent with advancing knowledge, and to keep that stability immune from changes for purely nomenclatural reasons which will not be understood by non-specialists. Failure of taxonomists to serve that function in good faith undermines their value to, and endangers the trust and respect of, their fellow non-specialists on whom the effectiveness of the Code depends.

Comment on languages of the Code (Article 85)

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The only proper way to address the issue of 'official' languages of the Code (see Article 85 of the Discussion Draft) is to have none! Why should English and French be the *only* languages? Spanish and German are now more widely used than French, and English is far from being the most widely used language. So, for expediency and neutrality, Article 85 should be modified as follows to reflect reality.

> **Article 85. Languages of the Code.**— The Commission may authorize the publication of the Code in any language and under such conditions as it may decide. All such authorized texts are official and are equivalent in force, meaning and authority. If it appears that there is a difference in meaning between official texts, the problem is to be referred to the Commission, whose interpretation shall be final.

Case 2947

Patella longicosta Lamarck, 1819 (Mollusca, Gastropoda): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the well established specific name of the South African limpet currently known as *Patella longicosta* Lamarck, 1819, which is threatened by the unused senior synonym *Patella digitata* Fischer von Waldheim, 1807.

Keywords. Nomenclature; taxonomy; Gastropoda; limpets; *Patella*; South Africa.

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1. In the third volume of his catalogue of the 'Muséum-Demidoff' Fischer von Waldheim (1807) described more than a hundred new molluscan taxa. These were not illustrated and the majority of the names have not been used by subsequent authors.

2. Ivanov, Kantor, Sysoev & Egorov (1993) recently published a paper detailing the subsequent history of the Demidoff collections and discussed and figured the types extant in the collections of the Zoological Museum of Moscow State University.

3. Ivanov et al. made some suggestions regarding the status of a number of these names and their relationships to other described taxa. In several instances the Demidoff material is clearly referable to species known from South Africa (confirmed by examination of the type specimens). In the case of one patellid limpet, the Fischer name pre-dates the currently used name for the species.

4. In this instance *Patella digitata* Fischer von Waldheim, 1807 (p. 115) appears not to have been used since its original publication whilst the junior synonym, *Patella longicosta* Lamarck, 1819 (p. 326), has been utilised extensively in both the scientific and popular literature pertaining to the southern African marine fauna (e.g. Barnard, 1951, p. 126; Branch, 1984, p. 62; 1985a, p. 109; 1985b, p. 210; Branch & Griffiths, 1988, p. 410; Christiaens, 1973, p. 1349; Day, 1969, p. 156; Jamieson, Hodgson & Bernard, 1991, p. 138; Kennelly, 1969, p. 59; Kensley, 1973, p. 20; Kilburn & Rippey, 1982, p. 38; Koch, 1949, p. 504; Powell, 1973, p. 125; Richards, 1981, p. 30). The extent of usage of *P. longicosta* meets the prima facie criteria for conservation set out in Article 79c of the Code, and the existence of the Fischer von Waldheim name clearly threatens the stability of long established nomenclature.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *digitata* Fischer von Waldheim, 1807, as published in the binomen *Patella digitata*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *longicosta* Lamarck, 1819, as published in the binomen *Patella longicosta*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *digitata* Fischer von Waldheim, 1807, as published in the binomen *Patella digitata* and as suppressed in (1) above.

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Case 2909

Glomeris Latreille, 1802 (Diplopoda): proposed conservation; *Armadillo vulgaris* Latreille, 1804 (Crustacea, Isopoda): proposed conservation of the specific name; and *Armadillo* Latreille, 1802 (Crustacea, Isopoda): application for a ruling on its status

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Abstract. The purpose of this application is to conserve the generic name *Glomeris* Latreille, 1802 (Diplopoda, family GLOMERIDAE Brandt, 1833) and the specific name of *Armadillo vulgaris* Latreille, 1804 (Isopoda, family ARMADILLIDIIDAE Brandt, 1833). The specific name of *Armadillo vulgaris* has long been treated as valid for the type species of *Armadillidium* Brandt, [1831] but it is threatened by the unused senior subjective synonyms *Oniscus armadillo* Linnaeus, 1758, *O. cinereus* Zenker in Panzer, 1799 and *O. variegatus* Villers, 1789; it is proposed that these names be suppressed. The name *Glomeris* is threatened by the senior synonym *Armadillo* Cuvier, 1792 which has been unused as a valid name for nearly 200 years; suppression of the latter is proposed. *Armadillo* Cuvier also threatens *Armadillo* Latreille, 1802 (Isopoda, family ARMADILLIDAE Brandt in Brandt & Ratzeburg, [1831]) as a senior homonym. Although formally invalid the name *Armadillo* Latreille is still in use and it is proposed that the Commission be asked to rule as to whether it be conserved or be replaced by the synonym *Pentheus* C.L. Koch, [1841]. *Glomeris* refers to a genus of conglobating millipedes found in Europe, North Africa and western Asia. *Armadillo* Latreille, 1802 represents a genus of Mediterranean conglobating woodlice. *Armadillidium* refers to a genus of more than 200 species of conglobating woodlice of central and southern Europe; *A. vulgare* is cosmopolitan through introductions.

Keywords. Nomenclature; taxonomy; Diplopoda; Isopoda; millipedes; woodlice; *Glomeris*; *Armadillo*; *Pentheus*; *Armadillidium vulgare*; Europe; North Africa; western Asia.

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1. This application seeks to conserve both generic and specific names for conglobating millipedes and woodlice. The form in which the proposal is presented is rather unusual since it is submitted by two authors who advocate different solutions to one nomenclatural problem discussed in it. Both authors are agreed on the desirability of conserving the generic name *Glomeris* Latreille, 1802 (Diplopoda, family GLOMERIDAE Brandt, 1833) and the specific name of *Armadillo vulgaris* Latreille, 1804 (Isopoda, family ARMADILLIDIIDAE Brandt, 1833) and the first part of the application is

submitted jointly. As a junior homonym of the unused *Armadillo* Cuvier, 1792 (Diplopoda) the much-used name *Armadillo* Latreille, 1802 (Isopoda, family ARMADILLIDAE Brandt in Brandt & Ratzeburg, [1831]) is formally invalid. One of us (P.T. Lehtinen) favours adoption of the junior subjective synonym *Pentheus* C.L. Koch, [1841], rather than *Armadillo* Latreille, and in the second part of the application (para. 12) this is discussed, with a proposal to place Koch's name on the Official List. In the third part of the application the second author of us (L.B. Holthuis) proposes (para. 14) that the current usage of *Armadillo* Latreille should be maintained. The Commission will be asked to vote to accept one of the alternate sets of proposals.

Part 1 (by P.T. Lehtinen and L.B. Holthuis)

2. The name *Armadillidium* Brandt in Brandt & Ratzeburg, [1831] was placed on the Official List in Opinion 104 (September 1928); '*vulgare* Lat[reille], 1804, p. 47, *armadillo* Linn[aeus], 1758, p. 637' was cited as the type species. In 1957 Francis Hemming (then Secretary to the Commission) undertook a revision of pre-1936 entries on the *Official List of Generic Names in Zoology* prior to its (1958) publication in book form. One of us (L.B. Holthuis, in litt. to Hemming, October 1957) pointed out that the specific name of *Oniscus armadillo* Linnaeus, 1758 was composite and mainly referred not to an isopod but to a millipede, and that the name was unused in both groups. He also noted that, although *Armadillo vulgaris* Latreille, 1804 was generally cited for the valid specific name of the type species of *Armadillidium*, there were a number of unused earlier synonyms. In 1958 (*Official List*, pp. xxxiii, 180) *Armadillidium* was withdrawn from the Official List for 'further examination and study'. There has been no further action until now.

3. Brandt (in Brandt & Ratzeburg, [1831], p. 81) described the genus *Armadillidium*. Authorship of the taxon has been ascribed to 'Brandt & Ratzeburg' but Brandt is clearly cited in this work (p. 71, footnote, p. 81) and in Brandt (1833) as the author of the new genera and species and at least the higher categories 'Oniscineae' and 'Armadillina'; Sherborn (1922, p. xxix) set out the dates of publication of the parts of the work. The new nominal species *Armadillidium commutatum* (pl. 13, figs. 1–3), *A. depressum* (pl. 13, figs. 4–6; misspelt as '*compressum*' on p. 81), *A. granulatum*, *A. pictum* and *A. pulchellum* were included. Of these, *granulatum*, *pictum* and *pulchellum* were nomina nuda and were not described until two years later (Brandt, 1833, pp. 185, 186, 188). Included in the synonymy of *commutatum* were two previously established nominal species, *Oniscus variegatus* Villers, 1789 (p. 188) and (partially and uncertainly) *Armadillo officinalis* Duméril, 1816 (p. 117; misspelt by Brandt as '*officinarum*'). Fowler (1912, p. 225) designated *Armadillidium commutatum* Brandt & Ratzeburg, [1831] as the type species.

4. The name *Armadillidium commutatum* Brandt in Brandt & Ratzeburg, [1831] has long been treated as a junior subjective synonym of *Armadillo vulgaris* Latreille, 1804 (p. 48) (see Vandel, 1962, p. 827). The specific name *vulgaris* was listed under *Armadillo* Latreille, 1802 (see para. 8 below) by Leach (1815, p. 376), Duméril (1816, p. 116), Desmarest (1825, p. 323) and most specialists in the first part of the 19th century (Risso, Say, Billberg, C.L. Koch, Samouelle, White and Schnitzler) and by Bate & Westwood ([1868], p. 491) and Miers ([1878]). It was included in *Armadillidium* by Milne-Edwards (1840, p. 184) and since Apstein (1915, p. 145) *vulgare* has been cited as the valid specific name of the type species of that genus.

5. Linnaeus (1758) placed all isopods in a single genus, *Oniscus*. As noted in para. 2 above, the name *O. armadillo* Linnaeus, 1758 (p. 637) has caused much confusion. Linnaeus's description of the species and his comment 'Pedes plures quam quatuordecim' refer not to an isopod but to a conglobating millipede. The references given by Linnaeus to his own works *Öländska och Gothländska Resa* (1745, p. 298) and *Fauna Suecica* (1746, p. 360, no. 1256) show the species to be most probably the common diplopod millipede currently known as *Glomeris marginata* (Villers, 1789). The third of Linnaeus's references was to Ray's (1710, p. 42) 'Asellus lividus major', which undoubtedly refers to the isopod *Armadillidium vulgare* (see Budde-Lund, 1885, p. 67). Furthermore, a specimen labelled '*Oniscus armadillo*' is present in the Linnean collection and is an example of *A. vulgare* (Latreille, 1804). Thus, the name *Oniscus armadillo* is composite; as used by Poda (1761, p. 126) and Scopoli (1763, p. 415) it referred to any one of a number of glomerid millipedes. Arcangeli (1932a, p. 124) attempted a specific identification. Latreille's (1802, p. 43) use of *armadillo* referred to an isopod (see para. 9 below). The specific name has not been applied to any new material since Latreille (1804) and has not been used for 190 years for either a glomerid or an isopod (see Vandel, 1962, p. 769). For the sake of stability in the nomenclature of both groups we propose that it be suppressed.

6. Desmarest (1825, p. 323) recorded that the name *Oniscus cinereus* Zenker in Panzer, 1799 (Heft 62, no. 22, text and plate) was an older name for the taxon *Armadillo vulgaris* Latreille, 1804. Dahl (1916, p. 69) noted the synonymy and adopted the earlier specific name; he was followed by some authors (Arcangeli, 1932b, p. 225 and numerous other papers; Meinertz, 1936, pp. 77, 78 and other papers). All subsequent authors, however, have used the name *Armadillidium vulgare* (Latreille) and we propose that *cinereus* be suppressed.

7. The name *Oniscus variegatus* Villers, 1789 (p. 188) has been regarded as a possible senior synonym of the isopod name *Armadillidium vulgare* (and of *A. commutatum* by Brandt & Ratzeburg, [1831]; see para. 3 above). *O. variegatus* could be interpreted as a senior synonym of any Swedish species of *Armadillidium*, but is most likely a synonym of one of the smaller species, *A. pictum* or *A. pulchellum*, both of Brandt (1833). Since the name is clearly a threat to species nomenclature within *Armadillidium* we propose that it be suppressed.

8. Cuvier (1792, p. 27) proposed the name *Armadillo* for a genus of conglobating millipedes. Two nominal species were included, *Oniscus pustulatus* Fabricius, 1781 (p. 379) and the new taxon *Armadillo marginalis*. The name *Glomeris* was established by Latreille (1802, p. 44) for the nominal species *Julus ovatus* Fabricius, 1775 and *Oniscus pustulatus* Fabricius. Since the establishment of Latreille's nominal genus, *Glomeris* has been used as the valid name for the taxon. Latreille (1810, p. 423) designated *Julus ovalis* Linnaeus, 1758 (p. 639) as the type species of *Glomeris*; *ovalis* is a senior synonym of *ovatus* Fabricius (see Jeekel, 1971, p. 9) but was not an originally included nominal species and Latreille's designation, which did not mention *ovatus*, is therefore invalid. Further invalid type designations for *Glomeris* were listed by Jeekel (1971, p. 14), who then validly designated *O. pustulatus* Fabricius as the type species in accord with usage. He also designated (p. 12) this species as the type of *Armadillo* Cuvier, 1792, thereby rendering *Glomeris* a junior objective synonym. However, Jeekel (1971, p. 11) urged that *Glomeris* should continue to be used and recommended that '*Armadillo* Cuvier should be placed on

the list of rejected names' and 'The name *Armadillo* should not be used in Diplopoda'. This was followed by Hoffmann (1979, pp. 66, 67). We propose that the name *Armadillo* Cuvier, 1792 be suppressed. The name *Glomeris* is much in use, both in works on taxonomy and the applied fields of biology, physiology and ecology. There are 67 publications listed in *Zoological Record on CD* (vols. 115–131) in which the name has been used between 1978 and 1994. Among the most recent papers are those by Meshkova (1987), Carrell (1990), Iatrou & Stamou (1991), Tajovsky, Villemin & Toutain (1991), Urbasek & Tajovsky (1991), Kohler, Storch & Alberti (1992), Byzov, Vu-Nguyen-Thanh & Babjeva (1993), Scheu (1993) and Stamou & Iatrou (1993). A printout of the full list of publications is held by the Commission Secretariat.

9. Latreille (1802, p. 43) described an isopod genus *Armadillo*, without reference to Cuvier's taxon but citing *Oniscus armadillo* Linnaeus, 1758, which is thus the type species by monotypy. Latreille (p. vii, footnote) noted 'Les genres qui me sont propres seront marqués d'un astérisque'. *Armadillo* is preceded by an asterisk and must be considered a new name, albeit a junior homonym of *Armadillo* Cuvier, 1792. In 1804 Latreille (pp. 48–49) noted Linnaeus's (1758) concept of *O. armadillo*: 'l'insecte qu'il avoit ainsi désigné ... est probablement notre armadille commun', and placed in *Armadillo* the new nominal species *A. vulgaris* (presumably a new name for the isopod part of *O. armadillo*), together with *O. variegatus* Villers, 1789 and *O. maculatus* Fabricius, 1781 (p. 378). Duméril (1816) mentioned Cuvier but used the name *Armadillo* for an isopod genus; he included the species *A. vulgaris*, *A. pustulatus* (possibly not *Oniscus pustulatus* Fabricius) and the new species *A. officinalis*. Brandt (in Brandt & Ratzeburg, [1831], pp. 82–84) used the name *Armadillo* for *officinalis* Duméril (see Brandt, p. 82, footnote, pl. 12, figs. 8–10), and erected the new genus *Armadillidium* for the new nominal species *commutatum* (= *Armadillidium vulgare* (Latreille, 1804); see para. 4 above) and related species (see paras. 3 and 4 above). This was followed by Milne-Edwards (1840, pp. 177, 180) and Budde-Lund (1885, pp. 16, 50); the latter listed several new nominal species in *Armadillo*, most of which have been transferred to other genera in the same family, and more than 50 additional species in *Armadillidium*. In 1904 Budde-Lund (p. 97) divided the genus *Armadillo* and in 1909 (p. 54) he designated *A. officinalis* as the type species of the nominotypical subgenus (and hence the genus) *Armadillo*; this designation was invalid but reflected the usage of the name. Brandt's ([1831]) taxonomic placement of *Armadillo vulgaris* Latreille and related species in *Armadillidium*, and of *Armadillo officinalis* Duméril and similar species in *Armadillo*, has been followed by all subsequent authors. Brandt ([1831], p. 80) placed *Armadillo* and *Armadillidium* in the group 'Armadillina' (currently used at family rank as ARMADILLIDAE); in 1833 (p. 184) he placed *Armadillidium* in the sub-group 'Armadillidia' (currently used at family level as ARMADILLIDIIDAE), and (p. 191) *Armadillo* with his new genus *Cubaris* in the sub-group 'Cubaridea'.

10. C.L. Koch ([1841], text, pl. 1; see Sherborn, 1922, p. lxxiv for the date of publication) described the genus *Pentheus*, based on his new species *P. punctatus*, and referred to *Armadillo* 'Brandt'. *P. punctatus* is a junior subjective synonym of *A. officinalis* Duméril, 1816. Miers ([1878], p. 664; see Duncan, 1937, p. 73 for the date of publication) based the genus *Orthonus* only on the shape of some tergites. The genus has often been listed as based solely on *A. officinalis*. This is incorrect but the

other included species, *A. inconspicuus* Miers, 1876 (a junior subjective synonym of *Spherillo danae* Heller, 1868), was mentioned in a footnote printed in smaller type. To prevent possible confusion in the future we now designate *A. officinalis* as the type species of *Orthonus* Miers, [1878], rendering the latter a junior subjective synonym of *Pentheus* C.L. Koch, [1841]. Dahl (1916, pp. 20, 65) adopted the name *Pentheus* for *officinalis* in place of *Armadillo* Latreille, 1802 because of the (unused) senior homonym *Armadillo* Cuvier. Barnard (1932, p. 289) commented: 'It seems as if *Pentheus* Koch might suit for the *officinalis* section ... but I do not definitely propose this as I have had access to the works of neither Brandt nor Koch'; he noted Budde-Lund's use, in several papers, of the name *Armadillo* Latreille. Arcangeli (1932a) set out the history of the names *Armadillo* Latreille and *Armadillidium*. He noted that *Armadillo* could be replaced by *Pentheus* but strongly recommended the maintenance of the former name as it had had long usage. Apart from Dahl (1916), neither *Pentheus* nor *Orthonus* has been used.

11. The name *Armadillo officinalis* Duméril, 1816 has an unused senior subjective synonym, *Oniscus globator* Cuvier, 1792. Cuvier's *O. globator* (1792, p. 24, pl. 26, figs. 19–22) is clearly the same species as Duméril's taxon and has been considered as such by all following authors, although they used the junior of the synonyms. *Oniscus globator* Cuvier is a junior primary homonym of *O. globator* Pallas, 1772 (suppressed for priority but not homonymy in Opinion 1574, March 1990) and thus Commission action is not required to deal with *globator* Cuvier.

Part 2 (Discussion and proposals by P.T. Lehtinen)

12. Latreille's (1802) concept of *Armadillo* was identical with that of *Armadillidium* of all present-day authors. The current usage of these names originated with the taxonomic interpretation of the two genera by Brandt, ([1831]), who placed *Armadillidium commutatum* Brandt, [1831] (= *Armadillo vulgaris* Latreille, 1804; see para. 4 above) in his new genus *Armadillidium* and retained *Armadillo* solely for *Armadillo officinalis* Duméril, 1816. Recognition of the latter as the type species of *Armadillo* sensu Duméril (1816), Brandt ([1831]) and subsequent usage is not in accord with the basic principles of zoological nomenclature. The species was not originally included, was most probably not intended and was possibly not even known to Latreille. Moreover, the name *Armadillo* Latreille is a junior homonym of *Armadillo* Cuvier, 1792. On the other hand, abandonment of the name *Armadillo*, together with its senior homonym, would solve all the problems concerning *Armadillidium*, the more important and well known of the two genera. The name *Armadillo* is much used but the number of species additional to *A. officinalis* included in the genus is very small. *Pentheus* C.L. Koch, [1841] has not generally been used but it is an available name and has a generally-accepted synonym of *A. officinalis* (*P. punctatus* C.L. Koch, [1841]) as the type species. I therefore propose that the Code should be applied and that *Pentheus* should be adopted in place of *Armadillo* auct., and CUBARIDAE Brandt, 1833 (p. 189) resurrected in place of ARMADILLIDAE auct. Brandt's family-group name, in use some decades ago, is based on the well known, worldwide genus *Cubaris* Brandt, 1833 (p. 189), which has a large number of genera closely related to it. I have proposed that the name CUBARIDAE be placed on the Official List, following conservation of the name *Cubaris* Brandt, 1833 (see BZN **52**: 155; June 1995).

13. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) the generic name *Armadillo* Cuvier, 1792;
  (b) the following specific names:
    (i) *armadillo* Linnaeus, 1758, as published in the binomen *Oniscus armadillo*;
    (ii) *variegatus* Villers, 1789, as published in the binomen *Oniscus variegatus*;
    (iii) *cinereus* Zenker in Panzer, 1799, as published in the binomen *Oniscus cinereus*;

(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Glomeris* Latreille, 1802 (gender: feminine), type species by subsequent designation by Jeekel (1971) *Oniscus pustulatus* Fabricius, 1781;
  (b) *Armadillidium* Brandt in Brandt & Ratzeburg, [1831] (gender: neuter), type species by subsequent designation by Fowler (1912) *Armadillidium commutatum* Brandt in Brandt & Ratzeburg, [1831] (a junior subjective synonym of *Armadillo vulgaris* Latreille, 1804);
  (c) *Pentheus* C.L. Koch, [1841], type species by monotypy *Pentheus punctatus* C.L. Koch, [1841] (a junior subjective synonym of *Armadillo officinalis* Duméril, 1816);

(3) to place on the Official List of Specific Names in Zoology the following names:
  (a) *pustulatus* Fabricius, 1781, as published in the binomen *Oniscus pustulatus* (specific name of the type species of *Glomeris* Latreille, 1802);
  (b) *vulgaris* Latreille, 1804, as published in the binomen *Armadillo vulgaris* (senior subjective synonym of *Armadillidium commutatum* Brandt in Brandt & Ratzeburg, [1831], the type species of *Armadillidium* Brandt in Brandt & Ratzeburg, [1831]);
  (c) *officinalis* Duméril, 1816, as published in the binomen *Armadillo officinalis* (a senior subjective synonym of *Pentheus punctatus* C.L. Koch, [1841], the type species of *Pentheus* C.L. Koch, [1841]);

(4) to place on the Official List of Family-Group Names in Zoology the name ARMADILLIDIIDAE Brandt, 1833 (type genus *Armadillidium* Brandt, [1831]);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
  (a) *Armadillo* Cuvier, 1792, as suppressed in (1)(a) above;
  (b) *Armadillo* Latreille, 1802 (a junior homonym of *Armadillo* Cuvier, 1792);

(6) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
  (a) *armadillo* Linnaeus, 1758, as published in the binomen *Oniscus armadillo* and as suppressed in (1)(b)(i) above;
  (b) *variegatus* Villers, 1789, as published in the binomen *Oniscus variegatus* and as suppressed in (1)(b)(ii) above;
  (c) *cinereus* Zenker in Panzer, 1799, as published in the binomen *Oniscus cinereus* and as suppressed in (1)(b)(iii) above;
  (d) *globator* Cuvier, 1792, as published in the binomen *Oniscus globator* (a junior homonym of *Oniscus globator* Pallas, 1772).

Part 3 (Discussion and proposals by L.B. Holthuis)

14. Numerous authors consistently use the name *Armadillo* Latreille, 1802 for an isopod genus, and *Armadillo officinalis* Duméril, 1816 is treated as the type species. This usage is not in accord with modern rules of nomenclature but these did not exist at the time that Brandt ([1831]) transferred *Armadillo vulgaris* Latreille, 1804 (under the name *Armadillidium commutatum* Brandt, [1831]) to his new genus *Armadillidium* and used *Armadillo* for *A. officinalis*. A brief study of *Zoological Record* over the last few years is sufficient to demonstrate that the names *Armadillo* Latreille and especially the family name based on it, ARMADILLIDAE Brandt, [1831], are very much in use. There are three or four (sometimes more) papers listed every year in which *Armadillo* has been adopted. A representative sample includes Saito (1986), Hoese & Janssen (1989), Schmalfuss (1990), Nair & Fadiel (1991) and Warburg (1992). A further 10 publications in which the name has been used between 1985 and 1992 are held by the Commission Secretariat. To my knowledge the junior synonym *Pentheus* C.L. Koch, [1841] has been used only once (by Dahl, 1916; see para. 10 above) and there is no family-group name based on it. I therefore propose that the name *Armadillo* Latreille, 1802 be conserved and that *A. officinalis* be designated the type species in accord with the usage since Brandt ([1831]).

15. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
  (a) to set aside all previous fixations of type species for the nominal genus *Armadillo* Latreille, 1802 and to designate *Armadillo officinalis* Duméril, 1816 as the type species;
  (b) to suppress the following names:
    (i) the generic name *Armadillo* Cuvier, 1792, and all uses of the name *Armadillo* prior to the publication of *Armadillo* Latreille, 1802, for the purposes of both the Principle of Priority and the Principle of Homonymy;
    (ii) As for para. 13, (1)(b)(i)-(iii);

(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) As for para. 13, (2)(a)-(b);
  (b) *Armadillo* Latreille, 1802 (gender: masculine), type species by designation in (1)(a) above *Armadillo officinalis* Duméril, 1816;

(3) to place on the Official List of Specific Names in Zoology the following names:
  (a) As for para. 13, (3)(a)-(b);
  (b) *officinalis* Duméril, 1816, as published in the binomen *Armadillo officinalis* (specific name of the type species of *Armadillo* Latreille, 1802);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
  (a) ARMADILLIDAE Brandt, [1831] (type genus *Armadillo* Latreille, 1802);
  (b) As for para. 13, (4);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
  (a) *Armadillo* Cuvier, 1792, as suppressed in (1)(b)(i) above;
  (b) *Orthonus* Miers, [1878] (a junior objective synonym of *Armadillo* Latreille, 1802);

(6) As for para. 13, (6)(a)-(d).

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Case 2894

Monstrilla Dana, 1849 and *Thaumaleus* Krøyer, 1849 (Crustacea, Copepoda): proposed conservation

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Abstract. The purpose of this application is to conserve the copepod names *Monstrilla* Dana, 1849 and *Thaumaleus* Krøyer, 1849 (family MONSTRILLIDAE Dana, 1849). The unused senior name *Thaumatoessa* Krøyer in Gaimard, [1842] threatens both names, as a subjective synonym of *Monstrilla* and as an objective synonym of *Thaumaleus*. It is proposed that *Thaumatoessa* be suppressed. Members of the MONSTRILLIDAE, the sole family of the order Monstrilloida, have larvae that are endoparasites of polychaetes and gastropods, whilst the non-feeding adults are free-swimming.

Keywords. Nomenclature; taxonomy; Copepoda; *Monstrilla*; *Thaumaleus*.

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1. In the work of illustrations known as Gaimard's *Atlas de Zoologie*, Krøyer (pl. 42, figs. 4a–e) figured a copepod with the accompanying caption '*Thaumatoessa Typica* Kr. nov. gen. et sp.' There was no text but the illustrations serve as an indication that renders available the names of both the genus and species (Article 12b(7) of the Code), the latter being the type species by monotypy. In December 1842 de la Roquette (p. 446) recorded that the first livraison, consisting of *Atlas* plates only, of the publication *Voyages de la Commission scientifique du Nord*, edited by Gaimard, had been issued (see also Sherborn & Woodward, 1901, p. 492 and Woodward, 1904, p. 607). The date [1842] has generally been accepted for Krøyer's crustacean illustrations. In their English translation of Krøyer's works Damkaer & Damkaer (1979, p. 4) 'somewhat arbitrarily' set the date of the *Atlas* as [1845] although they noted that 'possibly the plates were published over several years'.

2. Krøyer (1849) gave an extended description in Danish of the copepod *Thaumaleus typicus* (pp. 595–598), together with an etymology and Latin diagnosis of a new nominal genus *Thaumaleus* (p. 604), measurements of *Thaumaleus typicus* (p. 607), and dorsal and lateral illustrations of the single specimen (pl. 6, figs. 30 and 31), with the caption *Taumaleus* [sic] *typicus* and subcaptions referring to '*Th. typicus*'. The spelling '*Taumaleus*' of the generic name in the figure caption was overlooked until recently but I (Grygier, 1994), acting as first reviser, established *Thaumaleus* as the definitive spelling. The single individual was that previously illustrated by Krøyer in Gaimard's *Atlas de Zoologie* (para. 1 above). Krøyer (1849, p. 598) cited his earlier ([1842]) figure but did not mention the earlier generic name *Thaumatoessa*. Thus, under Articles 19a and 33b(i) of the Code, *Thaumaleus* Krøyer, 1849 is not an emendation but a junior objective synonym of *Thaumatoessa*, being based on the same type species (Article 61c(iii)). The date 1849 is given in the volume

index for Krøyer's paper. In the absence of more precise information the date of publication must be taken as 31 December 1849 (Article 21c).

3. Heine (1863, pp. 209–210) proposed '*Thaumatoëssa*' as a replacement name for the hummingbird genus *Loddigesia* Gould in Bonaparte, 1849 (family TROCHILIDAE) on the invalid grounds that the latter, being based on the name of a person, was unscientific. *Thaumatoessa* Heine is a junior homonym of *Thaumatoessa* Krøyer in Gaimard, [1842] and *Loddigesia*, having priority, is currently recognized as the valid name of this monotypic genus.

4. Only Hesse (1868, pp. 362 370, pl. 19, figs. 20–34) has used *Thaumatoessa* Krøyer as a valid name, in the description of his new species *Thaumatoessa armoricana*. Hesse's work went unnoticed until Giard (1900, p. 396) transferred this species to the new monotypic genus *Thaumatohessia*, where it still remains.

5. Apart from Hesse (1868), Krøyer's works remained unknown to other taxonomists working on monstrilloid copepods until Poppe (1891) cited the 1849 work. Some subsequent authors (Giesbrecht, 1892; Giard, 1900; Malaquin, 1901; Damkaer & Damkaer, 1979) have explicitly noted Krøyer's ([1842]) earlier use of *Thaumatoessa* but they and other authors have continued to treat *Thaumaleus* as the valid name. At least 26 nominal species worldwide have at one time or another been assigned to *Thaumaleus* in at least 50 taxonomic and planktological works (see, for example, T. Scott, 1904; van Breemen, 1908; A. Scott, 1909; Davis, 1949; Isaac, 1974, 1975; Huys & Boxshall, 1991). A representative list of 40 other works is held by the Commission Secretariat. Sars (1921) attempted to restrict the application of *Thaumaleus* to only *T. typicus*. Numerous authors have followed him by using *Cymbasoma* Thompson, 1888 in preference to *Thaumaleus* for species other than *T. typicus*. The taxonomic controversy surrounding these two genera paid no heed to the priority and availability of *Thaumatoessa* until I (Grygier, 1994) pointed out the earlier name; I mentioned (p. 241) the present application to suppress *Thaumatoessa* in order to conserve *Monstrilla* (see paras. 9 and 10 below).

6. I (Grygier, 1994) redescribed the holotype of *Thaumatoessa* (= *Thaumaleus*) *typica* Krøyer, [1842], a young female found at Bejan at the entrance to Trondheimsfjorden, Norway, and now housed in the Crustacea Collection of the University Zoological Museum, Copenhagen. I found that it fits the current definition of *Monstrilla* Dana, and that *T. typica* is very likely a senior subjective synonym of *Monstrilla longicornis* Thompson, 1890 or perhaps of the latter's supposed (see Isaac, 1975) junior synonym *M. clavata* Sars, 1921. The name *Monstrilla* thereby becomes a junior subjective synonym of *Thaumatoessa*. However, *Monstrilla* is much in use and more than 50 nominal species have been assigned to the genus (history summarized by Razouls, 1983).

7. The name *Monstrilla* Dana has almost always been attributed to 'Dana 1848' but its true date of publication, and that of its type species by monotypy *M. viridis* Dana, is really 1849. Huys & Böttger-Schnack (1994, pp. 208–209) and I (Grygier, 1994, p. 241) have discussed the relative priority of the three publications involved (Dana, 1849a, [1849]b, 1849c). Dana ([1849]b) is the full version of part 2 of the *Conspectus Crustaceorum* and it forms part of the proceedings of the 311th meeting of the American Academy of Arts and Sciences, convened on 8 November 1848. Dana (p. 53) presented Latin diagnoses of *Monstrilla* and of the only included species, *M. viridis* from 'mari Sulu' (the Sulu Sea between Borneo and the

Philippines). This was published after 8 August 1849, which was the date of the proceedings of the final meeting included in pp. 1–160 of the journal volume; these pages were issued together in 1849, a fact which has generally been overlooked because the title page of the whole volume is dated 1852. Dana (1849a) is a pamphlet which includes separates of parts 1 and 2 of the *Conspectus* bound with a common title page bearing the date 1847–1849, part 2 being unchanged in content and pagination from Dana ([1849]b) except for differently arranged footnotes on pp. 9–11. This separate's heading mistakenly gives 8 November 1849 (recte 1848) as the date of the oral presentation. In a summary of parts 1 and 2 of the *Conspectus*, Dana (1849c, p. 283) repeated the same Latin diagnosis of *Monstrilla* and mentioned *M. viridis*. The introductory paragraph cites Dana ([1849]b) by volume and page numbers but mistakenly reports that the oral presentation had taken place on 8 November 1849 (recte 1848). The monthly journal issue in which Dana (1849c) was published was dated September, 1849. The earliest evidence of the existence of these three versions of part 2 of the *Conspectus*, which I found in a survey of the proceedings of several American learned societies of the period, comes from a list of donations to the library of the Academy of Natural Sciences in Philadelphia (*Proceedings of the Academy*, **4**(11): 242–243); 1850). Dana's (1849a) publication is cited in a list dated 4 September 1849, whilst the journal issues in which Dana ([1849]b, 1849c) were published appear in a list dated 18 September 1849. On these grounds Dana's (1849a) publication has priority over the other two versions. The names MONSTRILLIDAE (published as 'Tribus Monstrillacea'), *Monstrilla and M. viridis* were all made available in the work (p. 53).

8. Dana (1849a, p. 53; [1849]b, p. 53; 1849c, p. 283) proposed 'Tribus Monstrillacea' for his new genus *Monstrilla*. I (Grygier, 1994) considered this rank of 'Tribus' between 'Ordo' and 'Familia' as equivalent to a superfamily. Dana (1852, p. 1311) classified *Monstrilla* as the only genus of the family MONSTRILLIDAE. Dana (1852) was an unofficial release by the author of part 2 of the Crustacea of the United States Exploring Expedition. Haskell (1942) did not present unambiguous evidence to contradict that date (the official issue, dated 1853, could not have been issued before 1854; see Haskell, 1942). Later authors have rarely attributed the family name MONSTRILLIDAE to an author, and then usually to 'Giesbrecht, 1892' but never, except for myself (Grygier, 1994), to Dana's *Conspectus*.

9. The name *Thaumaleus* Krøyer, 1849 has been used, rather than the senior name *Thaumatoessa* Krøyer in Gaimard, [1842], in about 50 publications over the last 100 years, and with recently increasing frequency in planktological as well as taxonomic works. The name *Monstrilla* Dana, 1849 which, in my view, is a junior subjective synonym of *Thaumatoessa* (and a senior synonym of the latter's objective synonym *Thaumaleus*), has been widely used and universally recognized for over 140 years and now includes more than 50 nominal species. *Monstrilla* is the type genus of the family MONSTRILLIDAE Dana and, by extension, of the order Monstrilloida. Suppression of *Thaumatoessa*, which since its publication has been treated as valid only by Hesse (1868; in 1994 I noted the need for its suppression), would ensure stability of current usage by conserving both the names *Monstrilla* and *Thaumaleus*. Approval of this suppression by the Commission will allow those workers who accept the synonymy of *Monstrilla* and *Thaumaleus* to use *Monstrilla* as the valid name; both these names will remain available to those who separate them at generic or subgeneric rank.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the generic name *Thaumatoessa* Krøyer in Gaimard, [1842] for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Monstrilla* Dana, 1849 [4 September] (gender: feminine), type species by monotypy *Monstrilla viridis* Dana, 1849;
   (b) *Thaumaleus* Krøyer, 1849 [31 December] (gender: masculine), type species by monotypy *Thaumatoessa typica* Krøyer in Gaimard, [1842];

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *viridis* Dana, 1849, as published in the binomen *Monstrilla viridis* (specific name of the type species of *Monstrilla* Dana, 1849);
   (b) *typica* Krøyer in Gaimard, [1842], as published in the binomen *Thaumatoessa typica* (specific name of the type species of *Thaumaleus* Krøyer, 1849);

(4) to place on the Official List of Family-Group Names in Zoology the name MONSTRILLIDAE Dana, 1849 (type genus *Monstrilla* Dana, 1849);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
   (a) *Thaumatoessa* Krøyer in Gaimard, [1842], as suppressed in (1) above;
   (b) *Thaumatoessa* Heine, 1863 (a junior objective synonym of *Loddigesia* Gould in Bonaparte, 1849 and a junior homonym of *Thaumatoessa* Krøyer in Gaimard, [1842]).

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Case 2967

Chaetodacus latifrons Hendel, 1915 (currently *Bactrocera latifrons*; Insecta, Diptera): proposed precedence of the specific name over that of *Dacus parvulus* Hendel, 1912

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Abstract. The purpose of this application is to conserve the specific name of *Bactrocera latifrons* (Hendel, 1915) (family TEPHRITIDAE) for the *Solanum* fruit fly by giving it precedence over that of *Dacus parvulus* Hendel, 1912. The name *latifrons* has been used widely and consistently in the literature, whereas *parvulus* has been used only three times since publication (twice, in 1950 and 1992, for misidentifications). The species is a major pest of peppers (*Capsicum annuum*) and other Solanaceae in south-east Asia. It has been introduced into the Hawaiian islands during the past century where it is also a serious pest. A lectotype for *C. latifrons* is designated.

Keywords. Nomenclature; taxonomy; Diptera; fruit flies; *Bactrocera latifrons*; south-east Asia; Hawaiian islands.

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1. Hendel (1912, p. 21) described *Dacus parvulus* based on a series of five specimens from Kanshirei, Formosa (now Taiwan). There is a single male (labelled type) and two females (labelled cotype) in the Deutsches Entomologisches Institut (DEI), Eberswalde, Germany, and two males (labelled cotype) in the Naturhistorisches Museum (NHMV), Vienna, Austria. The specimens were labelled as type and cotypes by Prof D.E. Hardy but no lectotype designation was made (see Hardy, 1968, p. 113). All the specimens have the status of syntypes and have been examined by one of us (I.M.W.). These specimens fall within the known range of variation of *Chaetodacus latifrons* Hendel, 1915, a species described from Tainan (Taiwan) and elsewhere (see para. 2 below), although they are smaller than average. The identity of the females is further confirmed in that they have their aculeus tips exposed showing the unusual tip shape distinctive of *C. latifrons*; the name *parvulus* must therefore be considered a senior subjective synonym of *latifrons*. A female from Tainan (leg. H. Sauter, May 1912), labelled as *parvulus* (NHMV) and assumed to be determined as such by Hendel, also has an exposed aculeus and is clearly *latifrons*.

2. Hendel (1915, p. 425) described *Chaetodacus latifrons*, based on a series of six specimens from Taiwan (Tainan, Takao and Suisharyo) and Singapore. One of us (I.M.W.) has examined a syntype male (labelled paratype) from Tainan (leg.

H. Sauter, March 1912), now in the Natural History Museum (NHM), London, and has seen other syntypes on earlier occasions: one male from Tainan (NHMV, labelled cotype by Hardy, 1968, p. 113) and four specimens in the Termeszettudomanyi Muzeum (TMB), Budapest, Hungary (sexes not noted at the time; 1986 visit). There is no doubt that these specimens represent the current understanding of the major pest of peppers (*Capsicum annuum*) and other Solanaceae in south-east Asia, which has also become adventive in the Hawaiian Islands. The name *latifrons* has been widely used for the species which is commonly known as the *Solanum* or Malaysian fruit fly. There has been no previous designation of a lectotype and we now designate the male from Tainan in the Natural History Museum, London as such. It is denoted by a standard NHM purple-edged lectotype label.

3. Shiraki (1933, p. 56, fig. 17) described *Chaetodacus antennalis*, based on a series of specimens of unspecified number reared from *Solanum xanthocarpum* from Tainan, Taiwan. This nominal species was placed in synonymy with *Dacus parvulus* by Hardy (1973, p. 49), with which it compared in its small size, and serves to confirm that these small Taiwanese specimens identified as *parvulus* are probably also Solanaceae-associated, in common with more typical *latifrons*.

4. The specific name of *Bactrocera latifrons* has been widely used. A recent review of fruit fly pests (White & Elson-Harris, 1992), for example, gives 13 references to the species using this name (or *Dacus latifrons*) and could have given many more, whereas *parvulus* is only mentioned in a taxonomic catalogue (see Hardy, 1977, p. 51). There is a single record of *parvulus* from India (see Philip, 1950) that appears to have been based on a misidentification of another species (see White & Elson-Harris, 1992). A third use (Tseng, Chen & Chu, 1992, p. 37, figs. 89–97 on p. 39, pl. 2, figs. 7, 28 and 29) of the name *parvulus* was also based on a misidentification. All retrievable biological information is accessible using the name *latifrons* and examples of references relevant to programs of fruit fly control, monitoring and survey in Asia and Hawaii are as follows: Hardy (1973; identification in Thailand), Wharton & Gilstrap (1983; parasitoids), Vargas & Nishida (1985; biology and ecology), Vargas & Mitchell (1987; rearing), and Liquido, Harris & Dekker (1994; ecology). A further 17 references demonstrating the usage of the name *latifrons*, dating from 1951 to 1995 and involving a further 27 authors, are held by the Commission Secretariat.

5. The newly developed male lure that is being used in survey and detection programs in the U.S.A. is called 'latilure', named after the specific name of *Bactrocera latifrons*. The emergency action plan developed by the United States Department of Agriculture and the Departments of Agriculture of the States of Hawaii, California and Florida, is titled 'Action Plan: *Bactrocera latifrons* (Hendel)'. That action plan will serve as eradication guidelines in the event of colonizing populations of *latifrons* being detected in mainland U.S.A.

6. There is much evidence for a prima facie case for the conservation of the specific name of *Chaetodacus latifrons* Hendel, 1915. The syntypes of *Dacus parvulus*, which are the only known specimens, are rather small but are nonetheless within the range of *latifrons*. However, with better knowledge of the genetics of *Solanum* fruit flies on Taiwan there is a remote possibility that it may become apparent that there are two taxa and both names will be required. We therefore propose that the name *latifrons* be given precedence over *parvulus*. Approval of the application by the Commission

will allow *latifrons* to continue as the valid name for the species if this is not taxonomically divided; if differentiated in the future, *parvulus* remains available for use as a specific or subspecific name.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that the specific name *latifrons* Hendel, 1915, as published in the binomen *Chaetodacus latifrons*, is to be given precedence over *parvulus* Hendel, 1912, as published in the binomen *Dacus parvulus*;

(2) to place on the Official List of Specific Names in Zoology the following names:

(a) *latifrons* Hendel, 1915, as published in the binomen *Chaetodacus latifrons* and as defined by the lectotype designated in para. 2 above, with the endorsement that it is to be given precedence over *parvulus* Hendel, 1912, as published in the binomen *Dacus parvulus*, whenever these names are considered to be synonyms;

(b) *parvulus* Hendel, 1912, as published in the binomen *Dacus parvulus*, with the endorsement that it is not to be given priority over *latifrons* Hendel, 1915, as published in the binomen *Chaetodacus latifrons*, whenever these names are considered to be synonyms.

Acknowledgements

We are grateful to Drs R. Contreras-Lichtenberg (*NHMV*), A. Dely-Draskovits (*TMB*), H.J. Müller (*DEI*) and B.R. Pitkin (*NHM*) for allowing one of us (I.M.W.) to examine specimens in their charge. We also wish to thank T. Matsuzawa for Japanese translation.

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Case 2933

Eudistoma Caullery, 1909 (Tunicata): proposed precedence over *Paessleria* Michaelsen, 1907

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Abstract. The purpose of this application is to give precedence to the tunicate (family POLYCITORIDAE) generic name *Eudistoma* Caullery, 1909 over the almost unused senior subjective synonym *Paessleria* Michaelsen, 1907. At least 75 species are placed in *Eudistoma*; it is possible that *Paessleria* might in future be appropriate for a subgenus containing its type species *P. magalhaensis* and some other *Eudistoma* species.

Keywords. Nomenclature; taxonomy; Tunicata; Ascidiacea; *Eudistoma*; *Paessleria*.

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1. Savigny (1816) originally included two nominal species in his genus *Distoma* (p. 176), one of them being *D. rubrum* (p. 177). The name *Distoma* subsequently became applied to a diverse group of tunicates which have more recently been referred to several genera in the families HOLOZOIDAE and POLYCITORIDAE. Caullery (1909, p. 42) regarded *Distoma* as a junior synonym of *Polycitor* Renier, [1804], but on the grounds of the then usage and the obscurity of Renier's work he retained *Distoma* as a valid name. Many years later the Commission rejected (Opinions 316, 427) the work by Renier in which *Polycitor* appeared as not having been properly published, but in 1957 (Opinion 478) this by then widely used generic name was conserved. Caullery (1909, p. 44) divided *Distoma* into the two subgenera *Eudistoma* and *Paradistoma*, without designating a type species for either; the failure to use the name *Distoma* for one of the subgenera was contrary to both the then current Rules and the modern Code, but in any event *Distoma* Savigny is a junior homonym of *Distoma* Retzius, 1786. It has not been used for many years.

2. In Opinion 478 the Commission designated *P. crystallinus* Renier, [1804] as the type species of *Polycitor*, in accordance with usage and with previous designations. This species had been placed by Harant (1929, p. 40) in Caullery's subgenus *Paradistoma*, and as a junior subjective synonym of *Polycitor* there has been no subsequent valid use of *Paradistoma*. Michaelsen (1930, p. 489) designated *Distoma rubrum* Savigny, 1816 (p. 177) as the type species of *Eudistoma*.

3. Michaelsen (1907, p. 68) proposed the genus *Paessleria* for the new single species (and single specimen) *P. magalhaensis* (p. 69) from the Straits of Magellan. Caullery (1909) overlooked *Paessleria*. Michaelsen (1915) briefly mentioned the name again, and in 1930 he allocated specimens from the Red Sea, Seychelles and southwestern Australia to *P. magalhaensis* and published (p. 489) a revised diagnosis. Van Name (1945, p. 132) and Kott (1969, p. 40) doubted that this specific synonymy was correct. No nominal species other than *P. magalhaensis* has ever been placed in

Paessleria, and indeed no new material of the species from the original region has been studied.

4. No author has used *Paessleria* as a senior synonym of *Eudistoma* Caullery, 1909, which has been in continuous wide use either as a genus or (incorrectly) as a subgenus of *Polycitor* or of *Sigillina* Savigny, 1816 (p. 40). Michaelsen himself (1930) treated *Eudistoma* and *Paessleria* as separate subgenera of *Sigillina*. *Eudistoma* is the name applied to at least 75 species; 39 of these are from Australia and the West Pacific, and others come from waters around North and South America, Africa and Japan, and also the Mediterranean. I have given the Commission Secretariat a list of 73 references by 23 authors which use *Eudistoma*; the major reviews are Van Name (1945), Millar (1962, 1977), Tokioka (1967), Nishikawa (1984) and Kott (1990).

5. The name *Eudistoma* denotes a well defined taxon, although the individual species are very difficult to characterise (especially if records are not kept of the colour and general appearance of living colonies). There is no doubt that Michaelsen's *P. magalhaensis* belongs to *Eudistoma*; however, some *Eudistoma* species fall into groups in which particular characters are shared, suggesting a possible close relationship. One such group (Kott, 1990, p. 192) may include *magalhaensis* and at least three other species, and this is an argument for not suppressing the almost unused name *Paessleria* so that it can remain available for possible use for a subgenus.

6. *Paessleria* Michaelsen, 1907 is a senior subjective synonym of *Eudistoma* Caullery, 1909, but except when mentioning the little known *P. magalhaensis* authors have used only the latter generic name. All the many other species have been first described in *Eudistoma*.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to give precedence to the name *Eudistoma* Caullery, 1909 over the name *Paessleria* Michaelsen, 1907 whenever the two are considered to be synonyms;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Eudistoma* Caullery, 1909 (gender: neuter), type species by designation by Michaelsen (1930) *Distoma rubrum* Savigny, 1816, with the endorsement that it is to be given precedence over *Paessleria* Michaelsen, 1907 whenever the two names are considered to be synonyms;
   (b) *Paessleria* Michaelsen, 1907 (gender: feminine), type species by monotypy *Paessleria magalhaensis* Michaelsen, 1907, with the endorsement that it is not to be given priority over *Eudistoma* Caullery, 1909 whenever the two names are considered to be synonyms;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *rubrum* Savigny, 1816, as published in the binomen *Distoma rubrum* (specific name of the type species of *Eudistoma* Caullery, 1909);
   (b) *magalhaensis* Michaelsen, 1907, as published in the binomen *Paessleria magalhaensis* (specific name of the type species of *Paessleria* Michaelsen, 1907).

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Case 2966

Cyclodomorphus praealtus (Reptilia, Squamata): a proposal that availability of the specific name be taken from the intended description by Shea, 1995

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Abstract. The purpose of this application is to ensure that the specific name of *Cyclodomorphus praealtus*, recently published for a new species of Australian alpine lizard, is treated as first made available by Shea (1995). The name was inadvertently made available by Osborne (1994) in a book which unexpectedly was published first.

Keywords. Nomenclature; taxonomy; Reptilia; Squamata; lizards; *Cyclodomorphus praealtus*; Australia.

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1. In 1993, Dr Glenn Shea of the Department of Veterinary Anatomy, University of Sydney, sent one of us (W. Osborne) for information purposes a copy of his draft manuscript 'A taxonomic revision of the *Cyclodomorphus casuarinae* complex (Squamata: Scincidae)'. In this manuscript an Australian alpine lizard was described as *Cyclodomorphus praealtus* sp. nov. Dr Shea requested that the name not be used in our publications prior to the publication of his paper. His paper was accepted for publication in the *Records of the Australian Museum* in September 1994, but was not published until April 1995.

2. In expectation that the description prepared by Dr Shea would be published well before our book *Wildlife of the Australian Snow-Country* (Green & Osborne, 1994), we planned to use Shea's name for this lizard. While our book was in the press, we became aware that Shea's paper had not been published and at galley proof stage requested the publisher to remove all reference to the new specific name This was done with one exception, heading the main species account on p. 104.

3. The appearance of the name *Cyclodomorphus praealtus* in the chapter on Reptiles (authored by W. Osborne) in our book is followed by a brief description, natural history notes and a colour photograph of the species. As the account was not intended to be a formal description, no type specimens are designated and no type locality given. However, the brief and incomplete description includes explicit comparison of one character (length of tail) with the species *C. casuarinae* to which the alpine species had previously been referred. By providing a diagnosis that purports to differentiate the taxon our description fulfils the criteria of availability.

4. In identifying the species as distinct, we note 'a recent taxonomic study of the two forms has revealed that they are separate species' and ascribe this in a footnote to 'G. Shea, personal communication'. Unfortunately, this does not explicitly identify Shea as the author of the new specific name or of the description. It follows that the 'author' of the name is Osborne. Our publication of the name *Cyclodomorphus praealtus* was not intended to be the formal publication of a new name, and we acknowledge that the name is formally published by G.M. Shea in his paper (1995, p. 105) and that he is the describer of the taxon and the author of the name.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress for the purposes of both the Principle of Priority and the Principle of Homonymy all uses of the name *praealtus* Osborne, 1994, as published in the binomen *Cyclodomorphus praealtus*, and all uses of the name prior to the publication of *Cyclodomorphus praealtus* Shea, 1995;

(2) to place on the Official List of Specific Names in Zoology the name *praealtus* Shea, 1995, as published in the binomen *Cyclodomorphus praealtus*;

(3) to place on the Official Index of Rejected and Invalid Names in Zoology the name *praealtus* Osborne, 1994, as published in the binomen *Cyclodomorphus praealtus*.

Acknowledgements

We are grateful to Dr. G.M. Shea and to Dr H.G. Cogger and Professor W.D.L. Ride of the International Commission on Zoological Nomenclature for confirmation that our inadvertent publication of this name amounts to making it available and for advice on action to be taken.

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Comments on the proposed conservation of *Stictostroma* Parks, 1936 (Porifera, Stromatoporoidea) and designation of *S. gorriense* Stearn, 1995 as the type species
(Case 2901; see BZN **52**: 18–20)

(1) Philippe Bouchet
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The suggestion that *S. gorriense* be designated as the type species of *Stictostroma* is straightforward and hardly needs discussion. However, I object to the proposal that *Stictostroma* be ruled to be available from Parks (1936). Since Parks did not designate a type species the name was first made available by Galloway & St. Jean (1957), and under Article 13b of the Code they are the authors of the name. Unless there is a synonym published between 1936 and 1957 (and the application does not mention one) the name *Stictostroma* could continue in use in its accustomed sense. The authorship does not form part of a name (Article 51), and the plenary powers should not be used to rule on authorship when there are no other nomenclatural consequences.

(2) Joseph St. Jean
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I support Dr Stearn's proposals, which maintain Parks's original concept of *Stictostroma* and its usage since. As stated in para. 5 of the application, Stearn (1995) has shown that the original material of *Stromatopora mammillata* Nicholson, 1873 (renamed *Stictostroma mamilliferum* by Galloway and myself in 1957) lacks diagnostic features. In contrast, the well preserved holotype of *Stictostroma gorriense* Stearn, 1995 was used by Parks (1936) when describing *Stictostroma*, and it has served as the reference (i.e. it has been the de facto type) for the determination of the characteristic internal skeletal morphology and micromorphology of the genus (to which some 40 species, most of them valid, have been assigned). The designation of *S. gorriense* as the type species will maintain the consistent interpretation of *Stictostroma* Parks, 1936.

Comment on the proposed conservation of the specific name of *Xerophila geyeri* Soós, 1926 (Mollusca, Gastropoda)
(Case 2870; see BZN **51**: 105–107, 336–338; **52**: 176–178)

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I write in reply to Dr Kadolsky's comment (published in BZN **52**: 176–178; June 1995). Clearly his main problem concerns the Code, and less so my application. My reply concerns the latter.

1. It appears to be necessary to emphasize once more (see BZN **51**: 338) that I did not use what Kadolsky calls 'the opportunity offered by Article 79c ... for sloppy

work and easy glory'. In this particular and in other cases, I really did 'bother to check whether older names, presently regarded as synonyms, are available', studying original descriptions and type specimens. This fact does not fit well into Kadolsky's argument and makes the discussion rather bizarre. Of course, old names should always be used instead of creating new ones. In accordance with the Code, however, unused old names should not replace well-known younger ones.

2. I feel that there is some inconsistency in Kadolsky's attitude to facts and objectivity. In his view my 'subjective' comments 'contribute nothing to the solution of the problem, and should not have any bearing'. Why should that be? Subjectivity cannot be avoided in cases like this. The application is, indeed, subjective and Kadolsky's argument, following an initial incorrect conclusion (see para. 3 below), is not itself an example of objectivity (see para. 4 below).

3. It is incorrect to conclude that 'Gittenberger found 25 citations' for the usage of the name *geyeri* from the fact that I listed such a number, and it is odd that my previous clarification concerning this point (BZN **51**: 338) has been neglected as if it were untrue. Is there a formal rule, or even a good reason, according to which we should spend time putting together as long as possible a list of references? Should that list be printed? I can imagine more useful activities and ways to spend money.

4. According to Kadolsky, the species *Trochoidea geyeri* is 'still one of the less frequent of the European land snail fauna'. The reasons for this statement are not given, which raises the question on what authority the notion is based. Opposing his view, I reiterate the fact that the specific name is indeed well known. The criteria for being considered well known are given in the Code. I selected references from various languages and disciplines to demonstrate the usage of the name (see para. 3 above). Additionally I referred for authority to *Zoological Record*, Mollusca (1967 and following years). Kadolsky's statement that 'it is easy to obtain such a number of citations [25] even for less important species' is mischievous because it might be incorrectly assumed that only 25 references were found. Apart from this, the implication that there are other, independent criteria to measure the importance of species requires an explanation. Kadolsky's 'belief' concerning the 'audience' is subjectivity par excellence, as are his views concerning the length of names and 'precedence as name based on a little known locality'.

5. Because of conceptual and methodological innovations, systematics has gained new respect among biologists in the scientific world today. We systematists could easily lose that respect by falling prey to prioritists' dogmatism in nomenclature.

Comment on the proposed conservation of the specific name of *Aplysia juliana* Quoy & Gaimard, 1832 (Mollusca, Gastropoda)

(Case 2949; see BZN **52**: 21–23)

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I am writing to support the application to conserve the name *Aplysia juliana* Quoy & Gaimard, 1832 for the sea hare which is found worldwide in warm waters.

The name *Aplysia sorex* Rang, 1828 should be suppressed as it refers to a species dubia. Engel & Eales (1957) and Eales (1960) reported that the specimen identified as *A. sorex* in the Muséum National d'Histoire Naturelle, Paris does not agree with the description of Rang's (1828) *sorex* and is probably not the type. Furthermore, specimens identified by various authors as *sorex* are usually juveniles of *juliana*.

A synonymy for *A. juliana* was given by Eales (1960, p. 363). I listed records of the taxon from the Indian Ocean (Bebbington, 1974) and from the Pacific Ocean (Bebbington, 1977).

Comment on the proposed conservation of the specific names of *Dodecaceria concharum* Örsted, 1843 and *Heterocirrus fimbriatus* Verrill, 1879 (currently *D. fimbriata*) (Annelida, Polychaeta) by the designation of a neotype for *D. concharum*
(Case 2899; see BZN **52**: 27–33)

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Andrew S.Y. Mackie
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In their application Gibson & Heppell suggest establishing a neotype for *Dodecaceria concharum*, the type species by monotypy of *Dodecaceria* Örsted, 1843, using a specimen from Cullercoats, Northumberland, England. Two species are present in the Cullercoats area (Garwood, 1982), one of which also occurs in the type locality of east Denmark. Gibson & Heppell's proposal, if accepted, would reserve the name *D. concharum* for the English species which does not occur at the type locality. Although it may be justified to designate a neotype for Örsted's species, we disagree with the choice of locality, and instead argue that it should be selected from topotypic material. Note that, contrary to Gibson & Heppell, only one of Örsted's localities is situated in the Öresund; the area between Fredrikshavn and Skagen is in the northwestern Kattegat.

The proposed selection of neotype locality represents a deliberate misuse of Örsted's name. Further, we question whether their choice of neotype will serve nomenclatural stability. The value of the proposed conservation of British records is not obvious. The taxonomic difficulties in separating species of *Dodecacaria* make it unlikely that the names *concharum* and *fimbriata* (or *caulleryi*) have been used with any great consistency. The consequences for Danish-Swedish records are clear: the use of *concharum* in publications such as Tauber (1879), Levinsen (1884), Thorson (1946), Eliason (1962) and Jägerskiöld (1971), as well as Örsted (1843), will have to be considered incorrect. This despite the admission by Gibson & Heppell that only one species occurs in the area! The Danish species must rightly be referred to as *D. concharum*, not *D. fimbriata*.

In our view a neotype of *D. concharum* should be selected from specimens obtained from one of Örsted's localities in Denmark. If the names *Heterocirrus fimbriatus* and *D. caulleryi* are both regarded as junior synonyms of *D. concharum*, then *Terebella ostreae* Dalyell, 1853 may constitute a suitable choice for the 'full salinity species'. If deemed necessary, this name could be stabilized by the designation of a neotype. The use of the latter name will render unnecessary suppression of the specific names *saxicola* Grube, 1855 and *ater* Quatrefages, 1865. Suppression of the specific name *sextentaculata* Chiaje, 1822, however, we consider justified as it is not in current use.

Nomenclatural as well as biological delineation problems in European *Dodecaceria* may prove more complicated than is presently known, and a correct historical interpretation will be less likely to cause confusion for future workers. We see no convincing reasons for reserving Örsted's name for a species that, according to the authors, cannot have been described by him, and did not even occur in the area.

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Comment on the proposed conservation of *Eophacops* Delo, 1935 and *Acernaspsis* Campbell, 1967 (Trilobita)

(Case 2944; see BZN **52**: 34–36)

H.B. Whittington
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I strongly support this application. The names *Eophacops* Delo, 1935 and *Acernaspis* Campbell, 1967 are based on well-known specimens and are in current use, whereas the types on which *Pterygometopidella* Wedekind, 1912 was based have not been traced; hence the meaning of this last name cannot be clarified.

Comment on the proposed designation of *S. pseudobrowniana* Kempf, 1971 as the type species of *Scottia* Brady & Norman, 1889 (Crustacea, Ostracoda)
(Case 2896; see BZN **51**: 304–305; **52**: 178)

Renate Matzke-Karasz
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I am fully familiar with the situation mentioned in this case, having recently published a study of *Scottia* and allied genera (Matzke-Karasz, 1995). *Scottia* was based on the living species later called *S. pseudobrowniana*, and I entirely support the proposals.

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Matzke-Karasz, R. 1995. Aktuelle Gattungs- und Artmerkmale bei *Scottia*, *Cyclocypris* und *Mesocypris* (Ostracoda). *Sonderveröffentlichungen des Geologischen Instituts der Universität zu Köln*, no. 97.

Comments on the proposed conservation of *Lironeca* Leach, 1818 (Crustacea, Isopoda) as the correct original spelling
(Case 2915; see BZN **51**: 224–226; **52**: 67–69, 178–179)

(1) Thomas E. Bowman
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Three of the authors (Drs Holthuis, Brandt and Bruce; see BZN **52**: 67–69) who have commented on this case have not addressed the key point (BZN **51**: 224, para. 3) that Leach's publishing eight generic names as anagrams of Caroline or Carolina and another that failed by a single easily mistaken letter ('v' for 'r') to be a ninth anagram constitutes 'in the original publication itself ... clear evidence of an inadvertent error' (Article 32c(ii) of the Code). Holthuis and Bruce do not dispose of this argument at all, but simply declare that there is no such evidence. Brandt says that printing errors are irrelevant, but if this were so the Code would not contain Article 32c(ii).

(2) Ernest H. Williams, Jr. & Lucy Bunkley Williams
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We agree with Dr Bowman in his comment above: Drs Holthuis, Brandt and Bruce do not address the principal argument. Their comments are of interest in providing additional background and history but do nothing to refute the proposals in the application. Since they have introduced auxiliary issues we will state a primary point, even though it is technically irrelevant. The *Lironeca* spelling would have the positive

effect of preserving the intent of the original author (which is beyond dispute: see BZN **51**: 224, para. 4), while the *Livoneca* spelling would have the negative effect of promoting a misspelling or misprint. We trust the ruling will preserve reality with *Lironeca*, not the surrealism of the *Livoneca* spelling.

(3) Gianni Bello
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I wish to support the proposal by Williams & Bowman to conserve *Lironeca* as the correct original spelling of the name of a genus of parasitic isopods.

I agree with all the points in the application, and in addition I would like to stress that the vast majority of zoological names have meanings even though this is not obligatory. These meanings are very helpful to workers who have to memorize names. Unfortunately in Leach's time Recommendation 25B of the Code did not exist, and he did not state the derivation of his names of parasitic isopod genera. Nevetheless his intention is perfectly evident: eight of the names are based on anagrams of the personal name Caroline or Carolina. The spelling *Livoneca*, on the other hand, has no meaning. I maintain that wherever possible the original intention of the author of scientific names should be respected.

Comment on the proposed conservation of *Aspidiphorus* Ziegler in Dejean, 1821 (Insecta, Coleoptera) as the correct original spelling, and the placement of ASPIDIPHORIDAE **Kiesenwetter, 1877 (1859) on the Official List**
(Case 2918; see BZN **52**: 44–47)

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The application by Dr Joseph McHugh clearly sets out the relevant facts concerning the name *Aspidiphorus* and we completely agree with the proposed conservation of this spelling over the original spelling *Arpidiphorus*.

We also agree with the facts presented concerning the family names ASPIDIPHORIDAE and SPHINDIDAE, but strongly disagree with the conclusion that priority should be followed here and ASPIDIPHORIDAE be used over SPHINDIDAE.

Until new data on both family-group names was presented recently (Lawrence & Newton, 1995; Pakaluk, Ślipiński & Lawrence, 1994; and para. 5 of the present application) SPHINDIDAE was thought to have priority over ASPIDIPHORIDAE, but more precise dating of the part of Jacquelin du Val's (1859 1863) work in which SPHINDIDAE was established suggests a date of 1860 or 1861, after establishment of CONIPORIDAE Thomson, 1859 (from which ASPIDIPHORIDAE derives its date, as indicated in para. 8 of the application). These facts and a recent taxonomic consensus that *Aspidiphorus* belongs in the SPHINDIDAE do require adoption of the senior name ASPIDIPHORIDAE for the family according to the Code.

There is no doubt that the name SPHINDIDAE is better known than ASPIDIPHORIDAE and it has, to our knowledge, been universally used for this family whether

Aspidiphorus is included or not, with one very recent exception (Pakaluk, Ślipiński & Lawrence, 1994). With the same exception, the family name ASPIDIPHORIDAE has been used only by some authors who have placed *Aspidiphorus* in a separate family of its own. The applicant, in an earlier draft of this application in which conservation of SPHINDIDAE over ASPIDIPHORIDAE was sought, listed 40 works showing use of the name SPHINDIDAE even when *Aspidiphorus* was included in the family, and such a list could be expanded easily (para. 8 mentions such a list submitted with the current application). The name SPHINDIDAE is used in all five of the 'key works' on the family mentioned at the end of para. 3 of the application; in all earlier papers of the applicant and other recent specialists on the family; and in every major recent book and general reference treating Coleoptera classification and biology (see, for example, Crowson, 1955, 1981; Freude, Harde & Lohse, 1967; Lawrence & Newton, 1982, 1995; Paulian, 1988; Lawrence & Britton, 1991, 1994; Stehr, 1991; Silfverberg, 1992; Lawrence, Hastings, Dallwitz & Paine, 1993). SPHINDIDAE is the only name ever used for this family in the New World, where *Aspidiphorus* does not occur (examples are Blackwelder, 1944; Hatch, 1961; Arnett, 1963, 1985; Elgueta & Arriagada, 1989; Bousquet, 1991). Further, the unusual biology of the species of this family (all restricted to feeding on Myxomycetes as far as known) has led to frequent references to it in literature dealing with myxomycete-beetle interactions (recent examples are Russell, 1979; Lawrence & Newton, 1980; Newton & Stephenson, 1990; Stephenson, Wheeler, McHugh & Fraissinet, 1994) and in general books reviewing fungus-insect relationships (for example multiple references in recent books edited by Wheeler & Blackwell, 1984 and Wilding, Collins, Hammond & Webber, 1989), all of which use the family name SPHINDIDAE. Finally, if ASPIDIPHORIDAE is adopted over SPHINDIDAE for the family name, any taxonomist choosing to return to a separate family status for *Aspidiphorus* would trigger two family-group name changes in the remaining sphindids (family and nominotypical subfamily names; three other subfamilies are currently recognized, for example in McHugh (1993)). An added mnemonic advantage of the family name SPHINDIDAE is the fact that all nine recognized genera except *Aspidiphorus*, and all four subfamilies, include the stem 'sphind-' in their names (McHugh, 1993).

Nevertheless, the application argues (para. 9) '... the group is so poorly known and the body of literature so small it seems appropriate to follow priority and use ASPIDIPHORIDAE as the valid name.' For the reasons given above, we disagree that the literature on this family is too insignificant to justify conservation of the name SPHINDIDAE. We are not opposed in general to following priority or other rules of the Code that require name changes, and have done so in many cases in recent reviews of all family-group names in Staphyliniformia (Newton & Thayer, 1992) and all family and subfamily names in Coleoptera (Lawrence & Newton, 1995). However, we think that changes in family names (as opposed to those of subfamilies and lower taxa) are especially unfortunate given that the family name is the most common point of reference in searching for systematic and biological literature on a taxon, especially for non-taxonomists. The near-universal use of the name SPHINDIDAE for this family for more than a century, and its growing use in the non-systematic literature, seem sufficient reasons to justify its conservation over the older name ASPIDIPHORIDAE. The latter name has been used in the broad sense (including SPHINDIDAE) only by Pakaluk, Ślipiński & Lawrence (1994), who followed strict priority for all included family-group names regardless of established usage.

For the above reasons we propose that this application be modified to include conservation of the family-group name SPHINDIDAE over ASPIDIPHORIDAE. This can be accomplished by placing the name SPHINDIDAE Jacquelin du Val, [1860], as well as ASPIDIPHORIDAE Kiesenwetter, 1877 (1859), on the Official List, with the endorsement that SPHINDIDAE be given precedence over ASPIDIPHORIDAE whenever the relevant type genera are placed together.

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Comment on the proposed conservation of *Hydromantes* Gistel, 1848 (Amphibia, Caudata) by the designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species
(Case 2868; see BZN **50**: 219–223; **51**: 149–153; **52**: 183–186)

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We wish to respond to the criticisms by Prof Dubois (BZN **52**: 183–186) of the application by two of us (Smith & Wake) to conserve the name *Hydromantes*, published in BZN **50**: 219–223.

1. Of the 20 views pertinent to this case reported by herpetologists (BZN **51**: 149–153), 100% were supportive, and their authors included five representatives from Europe (including one of the two co-authors of the name *Hydromantoides*), one from Africa, one from Canada, and one from Thailand, as well as the remainder from the U.S.A. Contrary to the statement by Dubois (BZN **52**: 183–186), complete agreement exists among these authors for approval of the application.

2. The arguments advanced in support of that agreement do differ, however, as Dubois observed; some views merely reflected a rejection of generic separation of European and American species (which would require use of *Hydromantoides* for the latter), whereas others were non-committal in that context. The application did not, on the contrary, concern the strictly zoological decision of generic (or subgeneric) separation of the two groups, and the voting by the Commission should not reflect any such concern. Whatever the grounds for support among the comments submitted, the support is still there and undoubtedly would be the same even if the American species were regarded as validly separated generically from the European species.

3. We understand the fundamentalist view Dubois represents, and we admire his uniquely thorough researches into nomenclatural history. Such dedication deserves its just rewards, but let them come where significant threat to nomenclatural stability does not exist. It is far more important to maintain established channels of communication than to follow significantly disruptive priority. Stability was stated in the Preamble of the 1985 edition of the Code as one of its primary objects, and the cover statement accompanying the Discussion Draft of the proposed Fourth Edition of the Code reiterates and strengthens that objective: 'The Editorial Committee has been guided by the principle that scientific names are labels for taxa and provide the only universal means of accessing zoological information. Stability in their application and form, consistent with taxonomy, is therefore of paramount importance

irrespective of any priority or linguistic consideration. This aim to maintain stability must take precedence over the tools that the Code uses to promote it. Thus, while priority remains the basis for determining validity, and linguistics the basis for the formation of names, neither is an end in itself. ... Like all zoologists, members of the Editorial Committee recognize that many names in current use are in breach of the existing Code and that no scientific purpose would be served by continuing to make them vulnerable to change for purely formal reasons. In the proposals for the Fourth Edition every effort has been made to ensure that names in present use will remain valid when the new Code comes into effect, or that they can be easily validated'.

4. The basic contention in the present case is therefore whether the proposed conservation is justified by significant nomenclatural confusion and workers' resentment that would otherwise result. While a gradual increase in adoption of the Dubois system has occurred among European herpetologists (likely the result of our delay in appealing for conservation, and the concomitant assumption that no alternative existed to Dubois's thesis), the use of *Hydromantes* is more frequent than ever, in spite of the fact that the *Zoological Record* from 1986 through 1993/4 lists not a single work for any of the three North American species of the genus. The coverage for European literature on the genus during that period perhaps was more nearly complete than for the North American literature. Nevertheless, we point out that during the relevant period, the *Zoological Record* listed 19 different works using the name *Hydromantes*, as opposed to only one using *Hydromantoides*, and eight using *Speleomantes*. Eight of the nine works using the latter two names came in the period 1990/1 -1993/4, when nine works were listed using *Hydromantes*.

5. In part because of the very incomplete coverage of all literature by the *Zoological Record* (see Chiszar, 1993) (especially non-taxonomic and non-scientific literature, although much of the taxonomic and scientific literature also escapes inclusion), the extent of usage of the name *Hydromantes* is not fully appreciated even by all specialists. We have submitted a list to the Commission Secretariat of 98 usages additional to those previously noted, all since 1924 (1925: 1; 1934: 1; 1947: 1; 1957: 1; 1966: 3; 1967: 2; 1968: 2; 1969: 1; 1970: 1; 1971: 1; 1972: 1; 1973: 1; 1974: 1; 1976: 2; 1978: 2; 1979: 1; 1980: 3; 1981: 1; 1982: 3; 1983: 4; 1984: 2; 1985: 1; 1986: 3; 1987: 3; 1988: 11; 1989: 3; 1990: 5; 1991: 10; 1992: 7; 1993: 6; 1994: 10; 1995: 4), and are certain that many more exist, probably of equal or greater number. Such a wide-spread usage is not to be dismissed lightly. We call attention particularly to Gorham (1974), Zeiner, Laudenslayer & Mayer (1988), Collins (1990), Steinhart (1990), Williams, Byrne & Rado (1992), Jennings & Hayes (1994), Thelander & Crabtree (1994) and Wake (1995) because of their synoptic nature and general reference importance.

6. The importance of name-usage in non-taxonomic works should not be underestimated by taxonomists, who are the guardians of biological nomenclature for the benefit not only of themselves, but also of the far more numerous biologists of other disciplines, be those disciplines ecology, conservation, protection, management, genetics, evolution, education, anatomy or physiology, at either molecular or organismic levels. Non-taxonomic biologists depend on taxonomists to assure stability of nomenclature insofar as it is consistent with biological knowledge, keeping that stability immune to changes for purely nomenclatural reasons, where

they are significantly disruptive to understanding by biologists in general. Failure of taxonomists to serve that function well undermines their value to, and endangers the faith in and respect of, their fellow biologists, on whom their acceptance depends.

7. We therefore hold that the voluminous non-taxonomic literature, in addition to the other literature on the taxa properly (under our application) referred to *Hydromantes*, fully justifies conservation of that name (whether applied solely to the European species or, in addition, to the North American ones), is consistent with the rules and spirit of the Code, is overwhelmingly supported by our colleagues, and does not limit consistency in any way with perpetually dynamic biological investigation or interpretation.

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Comments on the proposed conservation of the family-group name PHRYNOBATRACHINAE Laurent, 1941 (Amphibia, Anura)

(Case 2362; see BZN **51**: 240–246)

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I support this application to conserve the name PHRYNOBATRACHINAE Laurent, 1941. Prof Dubois seems justified in his view that priority should not be the sole consideration in this case. Given that, he appears to be correct in arguing that (i) adoption of the most commonly used subfamily name, PHRYNOBATRACHINAE, would cause least disturbance, and (ii) the name was proposed by Laurent for a group whose content has remained unchanged, apart from new additions, and so has proved to be a workable taxonomic unit. The second feature may indeed account for the popularity of Laurent's name.

The taxonomy of this group of frogs is in an unsatisfactory state, but Dubois's proposals would appear to be able to accommodate any changes in the future.

(2) Darrel R. Frost
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While we support most actions requested by Prof Dubois in this case, especially the endorsement concerning the long-unused name HEMIMANTIDAE Hoffman, 1878, we recommend alternatives to his principal other proposals.

The name PHRYNOBATRACHINAE Laurent, 1941 has been widely used since that date for a subfamily containing both *Petropedetes* Reichenow, 1874 and *Phrynobatrachus* Günther, 1862, but PETROPEDETINAE Noble, 1931 (a senior subjective synonym of PHRYNOBATRACHINAE) has also been extensively used for this family-group and, importantly, also in the comprehensive checklist of the amphibians of the world (Frost, 1985). This work has been adopted as the official classification of amphibians for the purposes of enforcement by the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). In this compendium the author of the name PHRYNOBATRACHINAE, R. Laurent, was one of the contributing reviewers to the PETROPEDETINAE section.

Seeking the conservation of the junior synonym PHRYNOBATRACHINAE when both it and PETROPEDETINAE have about equal frequencies of usage does not contribute to stability, particularly when PETROPEDETINAE is now most familiar to the non-systematic herpetology public. We therefore ask that the Commission use its plenary powers to accept the following alternatives to (1)(a)-(b) and 4(a)-(c) in para. 10 of the application:

(1) (a) to rule that the family-group name PETROPEDETINAE Noble, 1931 and other family-group names based on *Petropedetes* Reichenow, 1874 are to be given precedence over HEMIMANTIDAE Hoffman, 1878 and other family-group names based on *Hemimantis* Peters, 1863;

(b) to rule that the family-group name PHRYNOBATRACHINAE Laurent, 1941 and other family-group names based on *Phrynobatrachus* Günther, 1862 are to be given precedence over HEMIMANTIDAE Hoffman, 1878 and other family-group names based on *Hemimantis* Peters, 1863;

(4) to place on the Official List of Family-Group Names in Zoology the following names:

(a) PETROPEDETINAE Noble, 1931 (type genus *Petropedetes* Reichenow, 1874) with the endorsement that it and other family-group names based on *Petropedetes* are to be given precedence over HEMIMANTIDAE Hoffmann, 1878 (type genus *Hemimantis* Peters, 1863) and other family-group names based on *Hemimantis* and (by the first reviser action of Dubois, 1982) over CACOSTERNINAE Noble, 1931 (type genus *Cacosternum* Boulenger, 1887)

and other family-group names based on *Cacosternum*, whenever their type genera are placed in the same family-group taxon;

(b) CACOSTERNINAE Noble, 1931 (type genus *Cacosternum* Boulenger, 1887) with the endorsement that it and other family-group names based on *Cacosternum* are to be given precedence over HEMIMANTIDAE Hoffman, 1878 (type genus *Hemimantis* Peters, 1863) and other family-group names based on *Hemimantis*, but are not to be given priority over PETROPEDETINAE Noble, 1931 (type genus *Petropedetes* Reichenow, 1874) and other family-group names based on *Petropedetes*, whenever their type genera are placed in the same family-group taxon;

(c) PHRYNOBATRACHINAE Laurent, 1941 (type genus *Phrynobatrachus* Günther, 1862) with the endorsement that it and other family-group names based on *Phrynobatrachus* are to be given precedence over HEMIMANTIDAE Hoffman, 1878 (type genus *Hemimantis* Peters, 1863) and other family-group names based on *Hemimantis*, whenever their type genera are placed in the same family-group taxon.

Comment on the proposed conservation of *Lycognathophis* Boulenger, 1893 (Reptilia, Serpentes)
(Case 2877; see BZN **51**: 330–331)

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I strongly support this application: favorable actions in such cases, where a junior synonym has dominant usage, are very important in preserving nomenclatural stability.

Island snake faunas have been the subject of considerable recent attention, in part due to the serious economic and ecological effects of the introduction into Guam of the brown tree snake *Boiga irregularis*. *Lycognathophis seychellensis* is a member of the unique endemic herpetofauna of the Seychelles, and is of further interest because of the unusually enlarged anterior teeth of the lower jaw. It would be very unfortunate if its name were to be destabilized for no good reason, and I urge the Commission to accept Smith & Wallach's proposals.

Comments on the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*
(Case 2928; see BZN **51**: 135–146, 266–267, 342–348; **52**: 78–93, 187–192)

(1) Andrew Currant

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The proposal to replace the familiar mammalian generic name *Glis* Brisson, 1762 with the now largely forgotten *Myoxus* Zimmermann, 1780 is a particularly sad

example of the scholastic branch of taxonomy being out of touch with the rest of the world.

The position is put most eloquently in the *1994 IUCN Red List of Threatened Animals* (1993, p. xiii): 'Some level of taxonomic change is both inevitable and desirable, if new methods and new studies are to be pursued, but taxonomists sometimes appear oblivious to the needs of users of taxonomies. As just one example, sources in Wilson & Reeder (1993) note that the dormouse genus *Glis* Brisson 1762 is invalid and the earliest valid replacement is *Myoxus* Gray 1821 [recte Zimmermann 1780]. Adoption of this name, not used for decades, requires changing the family name from Gliridae to Myoxidae, and denies mammalogists *Glis glis*, a name both familiar and euphonious. The pragmatic taxonomist would not have agonised over the validity or otherwise of eighteenth century names, but kept his own counsel, or petitioned the International Commission on Zoological Nomenclature to conserve the familiar name under Article 79 of the Code'.

The problem of the availability of Brisson's mammal generic names was noted as being before the Commission, but still unresolved, by Ellerman & Morrison-Scott, back in 1951 (although there was then no formal application). In the intervening time the most widely acceptable decision on this matter seems to have been made by the people who actually make use of names and write about the animals concerned. There is surely a very strong argument for the retention of *Glis*, and indeed of the other disputed mammalian generic names used in Brisson's (1762) *Regnum Animale*, on the grounds of common usage and the maintenance of stability. Because of its protected and locally endangered status and significance as an environmental indicator species *Glis glis*, the edible or fat dormouse, appears in a vast amount of scientific, popular and educational literature and legislative documentation in Europe. The consequent replacement of the family name GLIRIDAE by MYOXIDAE would also be particularly unwelcome to users of the huge body of recent literature on European fossil rodents.

If the proposed adoption of *Myoxus* solved a knotty taxonomic problem I doubt if there would be such strong objection, but as it stands this seems to be little more than a gratuitous replacement of a very well known and widely used historical name by a lesser known synonym.

Additional reference

Groombridge, R. (Ed.). 1993. *1994 IUCN Red List of Threatened Animals*. lvi, 286 pp. IUCN – The World Conservation Union, Gland, Switzerland.

(2) M. Freudenthal

Department of Fossil Vertebrates, Nationaal Natuurhistorisch Museum, Postbus 9517, 2300 RA Leiden, The Netherlands

I am strongly in favour of the conservation of Brisson's generic names, especially of the name *Glis*, since I have been working on fossil GLIRIDAE. I think that it would serve the stability of nomenclature.

(3) Mieczyslaw Wolsan

Instytut Paleobiologii, Polska Akademia Nauk, al. Zwirkii i Wigury 93, 02–089 Warsaw, Poland

According to the Code, Brisson's (1762) *Regnum Animale* is not available for nomenclatural purposes because its author did not consistently apply the principle of binominal nomenclature. Although many recent workers reject this work, some others accept it. Therefore, for the sake of unambiguous scientific communication, it would be undoubtedly helpful and desirable for the Commission to reject Brisson's work formally, as proposed by Anthea Gentry.

Twelve mammal generic names, which were first published in the *Regnum Animale* of 1762, have generally been adopted by mammalogists and are in current use. These are *Philander*, *Pteropus*, *Glis*, *Cuniculus*, *Hydrochoerus*, *Odobenus*, *Meles*, *Lutra*, *Hyaena*, *Tapirus*, *Tragulus* and *Giraffa*. The name *Odobenus* Brisson, 1762 has already been conserved by the Commission (Opinion 467). Most of the remaining 11 names are those of type genera of well-established family-group taxa. Thus, it seems that a rejection of the 11 generic names would prejudice nomenclatural stability. However, I see no necessity for the attribution of the authorship of all the names to Brisson, as proposed in the application. The names *Philander*, *Pteropus*, *Meles*, *Lutra*, *Hyaena*, *Tapirus* and *Giraffa* are available with the same meaning from subsequent authors without any violation of stability of nomenclature. Moreover, the seven generic names have been so attributed by a number of workers. Changing these attributions to return to Brisson (1762), whose work is otherwise unavailable, would certainly not be in the interest of well-conceived stability.

(4) Claude Dupuis
Entomologie, Muséum National d'Histoire Naturelle, 45 Rue de Buffon, F-75005 Paris, France

Contre-propositions pour inscrire les ouvrages de Brisson (1759) et (1762) dans la Liste officielle

Je n'examinerai pas ici les propositions 1 à 7 de l'étude présentée par Anthea Gentry relativement aux noms génériques de mammifères de Brisson (1762) (BZN **51**: 135–146). Tout en admettant qu'il faut préserver au moins ceux de ces noms qu'ont réutilisés les successeurs de Brisson, je laisse aux mammalogistes le soin de discuter chacun des cas correspondants, notamment en ce qui concerne les espèces types.

Par contre, je m'oppose fermement à la proposition 8, c'est-à-dire à la mise à l'Index de Brisson (1762). Mes arguments, que je pourrais expliciter longuement si nécessaire, procèdent de quatre sortes de considérations.

1. *Questions de principe*

(a) J'estime que la Commission de nomenclature doit juger des noms, pris un par un, et le moins possible des ouvrages pris en bloc.

(b) La mise à l'Index, même aux seules fins de nomenclature, des grands classiques de la taxinomie — les ouvrages de Brisson sont de ceux-là — porte, qu'on le veuille ou non, un préjudice général à leur réputation. Dans le cas particulier, il ne faut pas oublier que Brisson a puissamment contribué à l'adhésion des zoologistes au système taxinomique hiérarchique catégorisé (classes, ordres, genres, espèces) sur lequel Linné a fondé le système de nomenclature catégorisée qui est le nôtre.

2. *Raisons pratiques*

(a) La mise à l'Index de grands classiques peut constituer, en matière de nomenclature même, une erreur qu'il faut ensuite corriger laborieusement (cf. les cas des noms de Geoffroy et de Martyn).

(b) Plutôt que de mettre à l'Index tout un ouvrage et de devoir aussitôt rétablir par exception ses noms les plus indispensables à la stabilité de la nomenclature, il me paraît judicieux d'inscrire cet ouvrage sur la Liste officielle, quite à mettre à l'Index par exception ses noms indésirables.

3. *Audience de la Commission*

(a) Pour être logique avec elle-même, la Commission se doit de résoudre le cas de Brisson (1762) comme elle a résolu (non sans difficultés, cf. Opinion 37, Directions 16 et 105) le cas Brisson (1760). Il suffit pour cela d'inscrire l'ouvrage dans la Liste officielle. Bien que les épithètes spécifiques n'y soient pas 'consistently' univerbales, ce travail obéit strictement à l'esprit catégorialiste de séparation entre genre et espèce d'une nomenclature binaire. La *Tabula synoptica Quadrupedum* de Brisson (1762, pp. 12–13) et sa *Tabula synoptica Cetaceorum* (p. 218) sont d'ailleurs totalement comparables à sa *Tabula synoptica Avium* de 1760.

(b) La Commission, dont la responsabilité se trouve engagée par la signature d'Anthea Gentry, doit montrer qu'elle connaît bien l'ouvrage qu'elle propose de mettre à l'Index. Dans le cas présent, elle doit savoir que 'Navarre' où enseignait Brisson était le collège de Navarre à Paris (on n'enseigne pas à Trinity et à Dublin). Elle doit savoir, comme il est dit dans l'ouvrage (cf. Bibliopola lectori p. 1), que Brisson (1762) a été édité par J.N.S. Allamand ('Vir. Cel. qui Historiam naturalem in nostra Academia Lugduno-Batava docet'). Elle doit savoir que ce livre comporte des additions (les plus importantes, qu'il faudrait peut-être examiner, sont empruntées à J.G. Gmelin, ex *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae*, **4** [1752–53] 1758 et **5** [1754–55] 1760). Elle doit savoir que, dans le texte (pp. 31, 163–166), Allamand a explicitement restreint le genre *Odobenus* de Brisson (1756) et (1759) à sa première espèce et qu'il en a retiré la seconde ('Le Lamantin/Manatus') pour la placer dans le genre *Phoca*. Elle doit savoir enfin, comme je le précise ci-après, que la suppression de Brisson (1762) serait totalement inutile car les noms génériques de 1756 ont déjà été rendus disponibles dès 1759!

4. *Antériorité de Brisson (1759)*

En 1759, François Alexandre Aubert de la Chesnaye des Bois a annexé, à la fin du tome 4 de son *Dictionnaire raisonné et universel des animaux* ... par M.D.L.C.D.B. (Paris [Bauche], 4 vols. in 4°), une 'Division générale de la classe des Quadrupèdes selon l'ordre dans lequel ils sont rangés dans le Regne animal de M. Brisson' (pp. 627–631) et une 'Division générale de la classe des Cétacés par M. Brisson' (p. 632).

Les 46 noms génériques des deux Tables/Tabulae de Brisson (1756) (deux dépliants face p. 22 pour les quadrupèdes, 42 genres; pour les cétacés p. 346, quatre genres) se retrouvent tous dans ces deux extraits. Ils y figurent, avec les mêmes numéros, en français et en latin, précédés respectivement du mot 'genre' et du mot 'genus'. Ces noms et numéros sont exactement ceux utilisés dans les deux Tabulae de 1762. Dans les Divisions générales de 1759, les noms génériques en latin sont au génitif, précisément parce qu'ils sont précédés du mot genus (p. ex. 'genre du

Philandre' = 'Genus *Philandri*'). Dans les Tabulae de 1756 et de 1762, ils sont au nominatif car l'omission du mot genus permet d'éviter le génitif.

Ces deux extraits rendent les noms de genres de mammifères de Brisson disponsibles dès 1759. En vertu de l'article 11c(i) du Code, l'absence de citation d'espèces nominales associées n'est pas un obstacle. En vertu de l'article 11g(i), l'emploi du génitif est parfaitement admis. En vertu de 12b(1), le renvoi à Brisson (1756) constitue une indication. Au surplus tous les caractères donnés en français et en latin représentent autant de descriptions.

Conclusion

Pour l'ensemble des considérations qui précèdent, je formule les contre-propositions suivantes:

(1) Inscrire Brisson *in* La Chesnaye (1759) et Brisson *édit.* Allamand (1762) dans la Liste officielle, au même titre que Brisson (1760).

(2) Examiner, un par un, les 11 noms de genres objets de la proposition d'Anthea Gentry, en vue d'inscrire le plus grand nombre possible d'entre eux dans la Liste officielle sous leur date de 1759.

(3) Examiner, un par un, les 10 noms de genres auxquels la proposition d'Anthea Gentry fait allusion (p. 137), en vue de mettre le plus grand nombre possible d'entre eux à l'Index sous leur date de 1759.

(4) Rectifier l'Opinion 467 et la Liste officielle en attribuant à *Odobenus* Brisson la date prioritaire de 1759.

OPINION 1815

Chromadora Bastian, 1865 and *Euchromadora* de Man, 1886 (Nematoda): conserved by the designation of *C. nudicapitata* Bastian, 1865 as the type species of *Chromadora*

Keywords. Nomenclature; taxonomy; Nematoda; *Chromadora*; *Euchromadora*.

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Chromadora* Bastian, 1865 are hereby set aside and *Chromadora nudicapitata* Bastian, 1865 is designated as the type species.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Chromadora* Bastian, 1865 (gender: feminine), type species by designation under the plenary powers in (1) above *Chromadora nudicapitata* Bastian, 1865;

(b) *Euchromadora* de Man, 1886 (gender: feminine), type species by original designation *Chromadora vulgaris* Bastian, 1865.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *nudicapitata* Bastian, 1865, as published in the binomen *Chromadora nudicapitata* (specific name of the type species of *Chromadora* Bastian, 1865);

(b) *vulgaris* Bastian, 1865, as published in the binomen *Chromadora vulgaris* (specific name of the type species of *Euchromadora* de Man, 1886).

History of Case 2848

An application to conserve the usage of both *Chromadora* Bastian, 1865 and *Euchromadora* de Man, 1886 by the designation of *Chromadora nudicapitata* Bastian, 1865 as the type species of *Chromadora* was received from Dr P.A.A. Loof (*Wageningen Agricultural University, Wageningen, The Netherlands*) on 13 May 1992. After correspondence the case was published in BZN **51**: 102–104 (June 1994). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 103–104. At the close of the voting period on 1 June 1995 the votes were as follows:

Affirmative votes — 23: Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson

Negative votes — none.

No votes were received from Cogger, Halvorsen, Trjapitzin and Uéno.

Bayer was on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Chromadora Bastian, 1865, *Transactions of the Linnean Society of London*, **25**: 167.
Euchromadora de Man, 1886, *Anatomische Untersuchungen über freilebende Nordsee-Nematoden*, p. 67.
nudicapitata, *Chromadora*, Bastian, 1865, *Transactions of the Linnean Society of London*, **25**: 167.
vulgaris, *Chromadora*, Bastian, 1865, *Transactions of the Linnean Society of London*, **25**: 167.

The following is the reference for the designation of *Chromadora vulgaris* Bastian, 1865 as the type species of the nominal genus *Euchromadora* de Man, 1886:
Man, J.G. de. 1886. *Anatomische Untersuchungen über freilebende Nordsee-Nematoden*, p. 67.

OPINION 1816

Lithobius piceus L. Koch, 1862 (Chilopoda): specific name conserved

Keywords. Nomenclature; taxonomy; Chilopoda; centipedes; *Lithobius piceus*; Europe.

Ruling

(1) Under the plenary powers the specific name *quadridentatus* Menge, 1851, as published in the binomen *Lithobius quadridentatus*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *piceus* L. Koch, 1862, as published in the binomen *Lithobius piceus*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *quadridentatus* Menge, 1851, as published in the binomen *Lithobius quadridentatus* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2919

An application for the conservation of the specific name of *Lithobius piceus* L. Koch, 1862 was received from Dr E.H. Eason (*Bourton Far Hill, Moreton-in-Marsh, Gloucestershire, U.K.*) on 30 November 1993. After correspondence the case was published in BZN **51**: 133-134 (June 1994). Notice of the case was sent to appropriate journals.

A note of support from Prof Alessandro Minelli (*Università di Padova, Padova, Italy*) was published in BZN **51**: 341 (December 1994).

Decision of the Commission

On 1 March 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 133. At the close of the voting period on 1 June 1995 the votes were as follows:

Affirmative votes - 21: Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys

Negative votes — 2: Dupuis and Thompson.

No votes were received from Cogger, Halvorsen, Trjapitzin and Uéno.

Bayer was on leave of absence.

Dupuis commented that, given the apparent taxonomic doubt surrounding the three names in question (paras. 2 and 3 of the application), it would be better to give *Lithobius piceus* L. Koch, 1862 precedence whenever they are considered to be synonyms, rather than suppressing *L. quadridentatus* Menge, 1851. Kabata commented: 'Article 79c of the Code seems to mandate acceptance of this application. I vote for it with some reluctance, however, as I think that adherence to the principle of priority would not result in any significant nomenclatural instability'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

piceus, *Lithobius*, L. Koch, 1862, *Die Myriapodengattung* Lithobius *darestellt*, p. 49.

quadridentatus, *Lithobius*, Menge, 1851, *Neueste Schriften der Naturforschenden Gesellschaft in Danzig*, **4**(2): 12.

OPINION 1817

Clavella Oken, 1815 and *Pennella* Oken, 1815 (Crustacea, Copepoda): conserved, and *Pennella diodontis* Oken, 1815: specific name conserved

Keywords. Nomenclature; taxonomy; Copepoda; *Clavella*; *Pennella*; *Pennella diodontis*.

Ruling

(1) Under the plenary powers it is hereby ruled that:

(a) the following names are available despite having been published in a rejected work:

(i) the generic names:

(A) *Clavella* Oken, 1815;

(B) *Pennella* Oken, 1815;

(ii) the specific name *diodontis* Oken, 1815, as published in the binomen *Pennella diodontis*;

(b) the following type fixations by monotypy in Oken (1815) are valid:

(i) *Lernaea uncinata* Müller, 1776 as the type species of *Clavella* Oken, 1815;

(ii) *Pennella diodontis* Oken, 1815 as the type species of *Pennella* Oken, 1815.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Clavella* Oken, 1815 (gender: feminine), as ruled in (1)(a)(i)(A) above, type species by monotypy *Lernaea uncinata* Müller, 1776 (a junior subjective synonym of *Lernaea adunca* Strøm, 1762), as ruled in (1)(b)(i) above;

(b) *Pennella* Oken, 1815 (gender: feminine), as ruled in (1)(a)(i)(B) above, type species by monotypy *Pennella diodontis* Oken, 1815, as ruled in (1)(b)(ii) above.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *adunca* Strøm, 1762, as published in the binomen *Lernaea adunca* (senior subjective synonym of the specific name of *Lernaea uncinata* Müller, 1776, the type species of *Clavella* Oken, 1815);

(b) *diodontis* Oken, 1815, as published in the binomen *Pennella diodontis* (specific name of the type species of *Pennella* Oken, 1815).

History of Case 836

An application for the conservation of the generic names *Clavella* and *Pennella*, both of Oken (1815), was received from Dr Z. Kabata (*Canada Department of Fisheries and Oceans, Pacific Biological Station, Nanaimo, B.C., Canada*) on 10 August 1993. After correspondence the case was published in BZN **50**: 273–276 (December 1993). Notice of the case was sent to appropriate journals.

Comments in support from Dr G.A. Boxshall (*The Natural History Museum, London, U.K.*) and Dr Dale W. Rice (*U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Mammal Laboratory, Seattle, Washington, U.S.A.*) were published in BZN **50**: 285–286 (December 1993) and **51**: 338–339 (December 1994) respectively.

A comment by Mrs A. Gentry (*ICZN Secretariat, c/o The Natural History Museum, London, U.K.*), published in BZN **51**: 339, pointed out that a number of generic names in several groups had previously been conserved from vol. 3 of Oken's (1815–1816) *Lehrbuch der Naturgeschichte* (cf. para. 2 of the application).

It was noted on the voting paper that *Pennella* Oken, 1815 was based on the single species *P. diodontis* Oken, 1815, which has been cited by most recent authors as the type species and as a valid name (para. 5 of the application and comments by Drs Boxshall and Rice). It was therefore desirable to conserve the specific name of *P. diodontis* Oken, 1815, in addition to the generic names *Clavella* and *Pennella*. This proposal was added, as (1)(c), to (1)(a) and (b) in para. 8(1) on BZN **50**: 275.

It was also noted that the fixation of *Lernaea uncinata* Müller, 1776 as the type species of *Clavella*, and that of *Pennella diodontis* Oken, 1815 as the type species of *Pennella*, had been given in the application (Proposals (2)(a) and (b)) as being 'by monotypy'. However, Oken (1815–1816) is a rejected work and is not available for nomenclatural acts. The Commission was therefore requested to rule that the type fixations by monotypy in Oken (1815) for *Clavella* and *Pennella* are valid.

Decision of the Commission

On 1 March 1995 the members of the Commission were invited to vote on the proposals published in BZN **50**: 275, with the addition of (c) to proposal (1) and the amendments to (2)(a) and (b) noted above. At the close of the voting period on 1 June 1995 the votes were as follows:

Affirmative votes — 23: Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson

Negative votes — none.

No votes were received from Cogger, Halvorsen, Trjapitzin and Uéno.

Bayer was on leave of absence.

Dupuis commented that the case demonstrated that it was often ill-advised to reject a work such as that by Oken.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

aduncа, *Lernaea*, Strøm, 1762, *Physik og oeconomisk beskrivelse over fogderiet Sondmor, beliggende i Bergens stift i Norge*, part 1, p. 167.

Clavella Oken, 1815, *Lehrbuch der Naturgeschichte*, vol. 3 (Zoologie), part 1, p. 358.

diodontis, *Pennella*, Oken, 1815, *Lehrbuch der Naturgeschichte*, vol. 3 (Zoologie), part 1, p. 358.

Pennella Oken, 1815, *Lehrbuch der Naturgeschichte*, vol. 3 (Zoologie), part 1, p. 358.

The following is the reference for the fixation of *Lernaea uncinata* Müller, 1776 as the type species of *Clavella* Oken, 1815, and of *Pennella diodontis* Oken, 1815 as the type species of *Pennella* Oken, 1815:

Oken, L. 1815. *Lehrbuch der Naturgeschichte*, vol. 3 (Zoologie), part 1, p. 358.

OPINION 1818

Rhopalosiphum monardae Davis, 1911 (currently *Hyalomyzus monardae*; Insecta, Homoptera): specific name conserved

Keywords. Nomenclature; taxonomy; Homoptera; aphids; *Hyalomyzus monardae*; North America.

Ruling

(1) Under the plenary powers the specific name *scrophulariae* Thomas, 1879, as published in the binomen *Phorodon scrophulariae*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *monardae* Davis, 1911, as published in the binomen *Rhopalosiphum monardae*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *scrophulariae* Thomas, 1879, as published in the binomen *Phorodon scrophulariae* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2890

An application for the conservation of the specific name of *Rhopalosiphum monardae* Davis, 1911 was received from Dr David J. Voegtlin (*Center for Biodiversity, Illinois Natural History Survey, Champaign, Illinois, U.S.A.*) on 26 April 1993. After correspondence the case was published in BZN **51**: 118–120 (June 1994). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 119. At the close of the voting period on 1 June 1995 the votes were as follows:

Affirmative votes — 19: Bock, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kraus, Lehtinen, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys

Negative votes — 4: Bouchet, Kabata, Macpherson and Thompson.

No votes were received from Cogger, Halvorsen, Trjapitzin and Uéno.

Bayer was on leave of absence.

Kabata commented: 'I fail to see why *Phorodon scrophulariae* is referred to as 'inappropriate' (para. 5 of the application; cf. Articles 18 and 23m of the Code). Reversion to the senior name is not likely to cause any great upheaval in nomenclature and I believe that in this case we should uphold the principle of priority'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

scrophulariae, *Phorodon*, Thomas, 1879, *Third Annual Report of the State Entomologist of Illinois*, **8**: 72.

monardae, *Rhopalosiphum*, Davis, 1911, *University of Nebraska Studies*, **11**(3): 288.

OPINION 1819

Bhatia Distant, 1908 (Insecta, Homoptera): *Eutettix olivaceus* Melichar, 1903 confirmed as the type species

Keywords. Nomenclature; taxonomy; Homoptera; leafhoppers; *Bhatia*; *Bhatia olivaceus*.

Ruling

(1) It is hereby confirmed that the nominal species *Eutettix olivaceus* Melichar, 1903 is the type species of the genus *Bhatia* Distant, 1908.

(2) The name *Bhatia* Distant, 1908 (gender: feminine), type species by monotypy *Eutettix olivaceus* Melichar, 1903 as confirmed in (1) above, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *olivaceus* Melichar, 1903, as published in the binomen *Eutettix*? *olivaceus* (specific name of the type species of *Bhatia* Distant, 1908) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2929

An application for the confirmation of *Eutettix olivaceus* Melichar, 1903 as the type species of *Bhatia* Distant, 1908 was received from Mr M.D. Webb (*The Natural History Museum, London, U.K.*) on 25 February 1994. After correspondence the case was published in BZN **51**: 116–117 (June 1994). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 116. At the close of the voting period on 1 June 1995 the votes were as follows:

Affirmative votes — 23: Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Thompson

Negative votes — none.

No votes were received from Cogger, Halvorsen, Trjapitzin and Uéno.

Bayer was on leave of absence.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Bhatia Distant, 1908, *The fauna of British India including Ceylon and Burma*, vol. 4 (Rhynchota), p. 357.

olivaceus, *Eutettix*, Melichar, 1903, *Homopteren-Fauna von Ceylon*, p. 191.

OPINION 1820

A.A.H. Lichtenstein's (1796, 1797) *Catalogus musei zoologici ... Sectio Tertia. Continens Insecta* and D.H. Schneider's (1800) *Verzeichniss einer Parthei Insekten ...* : suppressed, with conservation of some Lichtenstein (1796) names (Insecta and Arachnida)

Keywords. Nomenclature; taxonomy; Insecta; Arachnida; *Solpuga*.

Ruling

(1) Under the plenary powers it is hereby ruled that:

(a) the following works are suppressed for nomenclatural purposes:

(i) Lichtenstein, A.A.H. 1796. *Catalogus musei zoologici ditissimi Hamburgi, d. III. Februar 1796 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;

(ii) Lichtenstein, A.A.H. 1797. *Catalogus musei zoologici ditissimi Hamburgi, d. 16 Majus 1797 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;

(iii) Schneider, D.H. 1800. *Verzeichniss einer Parthei Insekten welche am 6ten März 1800 zu Stralsund in öffentlicher Auction einzeln verkauft werden sollen*;

(b) the generic name *Solpuga* Lichtenstein, 1796 (Solifugae) is available despite having been published in a suppressed work;

(c) the following specific names are available despite having been published in a suppressed work (Lichtenstein, 1796), in combination with the generic name shown in each case:

(i) *caedemadens*, *Cassida* (Coleoptera);
(ii) *caperans*, *Brachycerus* (Coleoptera);
(iii) *chelicornis*, *Solpuga* (Solifugae);
(iv) *chrysis*, *Lygaeus* (Heteroptera);
(v) *chrysothorax*, *Vespa* (Hymenoptera);
(vi) *coloboptera*, *Vespa* (Hymenoptera);
(vii) *ephippium*, *Cassida* (Coleoptera);
(viii) *ephippium*, *Reduvius* (Heteroptera);
(ix) *fatalis*, *Solpuga* (Solifugae);
(x) *filum*, *Mantis* (Mantodea);
(xi) *gnatho*, *Brentus* (Coleoptera);
(xii) *haematites*, *Cassida* (Coleoptera);
(xiii) *junix*, *Brachycerus* (Coleoptera);
(xiv) *neriifolia*, *Locusta* (Orthoptera);
(xv) *nitida*, *Cicindela* (Coleoptera);
(xvi) *portentosa*, *Acheta* (Orthoptera);
(xvii) *purpurea*, *Sagra* (Coleoptera);
(xviii) *umbretta*, *Phasma* (Phasmida);
(xix) *v-luteum*, *Cimex* (Heteroptera).

(2) The name *Solpuga* Lichtenstein, 1796 (gender: feminine), type species by subsequent designation by Pocock (1897) *Solpuga chelicornis* Lichtenstein, 1796, as conserved in (1)(b) above, is hereby placed on the Official List of Generic Names in Zoology.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology with authorship of Lichtenstein (1796), page references as cited and first published in combination with the generic name shown in each case, as conserved in (1)(c) above:

(a) *caedemadens*, *Cassida* (p. 65);
(b) *caperans*, *Brachycerus* (p. 55);
(c) *chelicornis*, *Solpuga* (p. 218; specific name of the type species of *Solpuga* Lichtenstein, 1796, p. 216);
(d) *chrysis*, *Lygaeus* (p. 109);
(e) *chrysothorax*, *Vespa* (p. 203);
(f) *coloboptera*, *Vespa* (p. 202);
(g) *ephippium*, *Cassida* (p. 65);
(h) *ephippium*, *Reduvius* (p. 111);
(i) *fatalis*, *Solpuga* (p. 217);
(j) *filum*, *Mantis* (p. 81);
(k) *gnatho*, *Brentus* (p. 53);
(l) *haematites*, *Cassida* (p. 66);
(m) *junix*, *Brachycerus* (p. 55);
(n) *neriifolia*, *Locusta* (p. 82);
(o) *nitida*, *Cicindela* (p. 32);
(p) *portentosa*, *Acheta* (p. 85);
(q) *purpurea*, *Sagra* (p. 60);
(r) *umbretta*, *Phasma* (p. 78);
(s) *v-luteum*, *Cimex* (p. 106).

(4) The following works are hereby placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature, as suppressed in (1)(a) above:

(a) Lichtenstein, A.A.H. 1796. *Catalogus musei zoologici ditissimi Hamburgi, d. III. Februar 1796 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;
(b) Lichtenstein, A.A.H. 1797. *Catalogus musei zoologici ditissimi Hamburgi, d. 16 Majus 1797 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;
(c) Schneider, D.H. 1800. *Verzeichniss einer Parthei Insekten welche am 6ten März 1800 zu Stralsund in öffentlicher Auction einzeln verkauft werden sollen.*

History of Case 2862

An application for the suppression for nomenclatural purposes of the publications by A.A.H. Lichtenstein (1796, 1797) entitled *Catalogus musei zoologici ... Sectio Tertia. Continens Insecta* and by D.H. Schneider (1800) entitled *Verzeichniss einer Parthei Insekten ...*, together with the conservation of some Lichtenstein (1796) names (Insecta and Arachnida), was received from Dr I.M. Kerzhner (*Zoological Institute, Academy of Sciences, St Petersburg, Russia*) on 1 September 1992. After correspondence the case was published in BZN **51**: 108–115 (June 1994). Notice of the case was sent to appropriate journals.

A comment in support from Mr Robert D. Pope (*c/o The Natural History Museum, London, U.K.*) was published in BZN **51**: 339 (December 1994).

It was noted on the voting paper that, as stated in the application (para. 8 and table 1), the generic name *Phasma* and the specific name of *P. empusa* have already been conserved and placed on Official Lists (Opinion 641, Sepember 1962) attributed to Lichtenstein (1796). Under Article 78f(i) of the Code both are available names and remain so under Article 78i.

Decision of the Commission

On 1 March 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 111–112. At the close of the voting period on 1 June 1995 the votes were as follows:

Affirmative votes — 21: Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys

Negative votes — 1: Thompson.

Dupuis abstained.

No votes were received from Cogger, Halvorsen, Trjapitzin and Uéno.

Bayer was on leave of absence.

Dupuis commented that, given the historical importance of the publications and that some names were based on specimens in the Lichtenstein and Schneider collections, he was not in favour of suppressing the works but preferred to deal with names individually. Thompson commented: 'This is an application for suppression based on an assumption of instability, with no documentation as to actual or even potential cases of it. Science calls for the resolution of uncertainty. The proper course is to examine the names and associated descriptions, determine their status and then decide whether there is a real need to suppress the names'.

Original references

The following are the original references to the works placed on the Official Index by the ruling given in the present Opinion:

Lichtenstein, A.A.H. 1796. *Catalogus musei zoologici ditissimi Hamburgi, d. III. Februar 1796 auctionis lege distrahendi. Sectio Tertia. Continens Insecta.*

Lichtenstein, A.A.H. 1797. *Catalogus musei zoologici ditissimi Hamburgi, d. 16 Majus 1797 auctionis lege distrahendi. Sectio Tertia. Continens Insecta*;

Schneider, D.H. 1800. *Verzeichniss einer Parthei Insekten welche am 6ten März 1800 zu Stralsund in öffentlicher Auction einzeln verkauft werden sollen.*

The following is the original reference to the names placed on Official Lists by the ruling given in the present Opinion (listed above, and given with current generic placements in table 1 on BZN **51**: 113, June 1994):

Lichtenstein, A.A.H. 1796. *Catalogus musei zoologici ditissimi Hamburgi, d. III. Februar 1796 auctionis lege distrahendi. Sectio Tertia. Continens Insecta.*

The following is the reference for the designation of *Solpuga chelicornis* Lichtenstein, 1796 as the type species of the nominal genus *Solpuga* Lichtenstein, 1796:

Pocock, R.I. 1897. *Annals and Magazine of Natural History*, (6)**20**: 255.

OPINION 1821

Cliola (*Hybopsis*) *topeka* Gilbert, 1884 (currently *Notropis topeka*; Osteichthyes, Cypriniformes): specific name conserved

Keywords. Nomenclature; taxonomy; Osteichthyes; Cypriniformes; freshwater fish; *Notropis topeka*; North America.

Ruling

(1) Under the plenary powers the specific name *tristis* Girard, 1856, as published in the binomen *Moniana tristis*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *topeka* Gilbert, 1884, as published in the binomen *Cliola* (*Hybopsis*) *topeka*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *tristis* Girard, 1856, as published in the binomen *Moniana tristis* and as defined by the lectotype (specimen no. MNHN 427 in the Muséum National d'Histoire Naturelle, Paris) designated by Mayden & Gilbert (1989), suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2808

An application for the conservation of the specific name of *Cliola* (*Hybopsis*) *topeka* Gilbert, 1884 was received from Drs Frank B. Cross and Joseph T. Collins (*Museum of Natural History, The University of Kansas, Lawrence, Kansas, U.S.A.*) on 11 January 1991. After correspondence the case was published in BZN **49**: 268–270 (December 1992). Notice of the case was sent to appropriate journals.

A comment in support from Prof Hobart M. Smith (*University of Colorado, Colorado, U.S.A.*) was published in BZN **50**: 144 (June 1993). Opposing comments from Prof Richard L. Mayden (*University of Alabama, Tuscaloosa, Alabama, U.S.A.*) & Dr Carter R. Gilbert (*Florida Museum of Natural History, University of Florida, Gainesville, Florida, U.S.A.*), and from Dr Bernard Kuhajda (*University of Alabama, Tuscaloosa, Alabama, U.S.A.*), were published in BZN **50**: 287–289 (December 1993). A reply by the authors of the application was published at the same time (BZN **50**: 289). A further comment from Prof Mayden was published in BZN **51**: 262 (September 1994). A comment from Dr Reeve M. Bailey (*Museum of Zoology, University of Michigan, Ann Arbor, Michigan, U.S.A.*), published in BZN **51**: 262–263, supported the application and also pointed out that Girard's paper, in which the name *Moniana tristis* appeared, was first published in 1856 (and not 1857 as cited in the application).

Decision of the Commission

On 1 March 1995 the members of the Commission were invited to vote on the proposals published in BZN **49**: 269. At the close of the voting period on 1 June 1995 the votes were as follows:

Affirmative votes — 17: Bock, Cocks, Corliss, Hahn, Heppell, Holthuis, Kraus, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys

Negative votes - 6: Bouchet, Dupuis, Kabata, Lehtinen, Macpherson and Thompson.

No votes were received from Cogger, Halvorsen, Trjapitzin and Uéno.

Bayer was on leave of absence.

Voting for, Bock commented: 'It is essential for all zoologists to realize that the only goal of zoological nomenclature is to facilitate communication between all workers interested in the biology of animals. Nothing is gained and much is lost every time an established name is replaced by an unused senior synonym regardless of why the senior synonym had become unused. Hence I urge all zoologists to apply to the Commission every time they discover such an unused senior synonym rather than to introduce this name into the zoological literature. Every effort should be made to conserve well-established names and to suppress unused senior synonyms'. Cocks commented: 'This is clearly a case of the 'rules' versus 'established usage'. I was swayed in the end by Dr Bailey's support'. Voting against, Dupuis commented: 'Owing to some taxonomic uncertainties and doubts concerning the syntypes and lectotypes of the two nominal species in question, I vote against. This is not a vote in favour of the inscription of *tristis* Girard, 1856 on the Official List, which would be premature'. Thompson commented: 'The arguments of Mayden & C.R. Gilbert should be heeded. The application requests that a junior name be conserved on the basis of 'usage'. 'Usage' is difficult to define; it is not merely the number of authors and titles. Adoption of the senior name *tristis* Girard in a Peterson field guide undoubtedly accounts for more than all the scientific papers cited by Cross & Collins. When there are reasonable arguments on both sides the final arbiter is priority, not usage'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

tristis, *Moniana*, Girard, 1856, *Researches upon the cyprinoid fishes inhabiting the fresh waters of the United States, west of the Mississippi Valley, from specimens in the museum of the Smithsonian Institution*, p. 37. (First issued as a separate in September 1856; published in the *Proceedings of Natural Sciences of Philadelphia*, **8:** 201 in 1857).

topeka, *Cliola* (*Hybopsis*), Gilbert, 1884, *Bulletin of the Washburn College Laboratory of Natural History*, **1**(1): 13.

The following is the reference for the designation of the lectotype of *Moniana tristis* Girard, 1856:

Mayden, R.L. & Gilbert, C.R. 1989. *Copeia*, **1989**(4): 1087.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 52, part 4 (pp. 289–364) 20 December 1995

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 52, part 3 (published on 28 September 1995). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Buccinum cinctum* Röding, [1798] (currently *Burnupena cincta*; Mollusca, Gastropoda): proposed conservation of the specific name. (Case 2993). Y. Dempster.

(2) *Nothosaurus* Münster, 1834 (Reptilia, Sauropterygia): proposed conservation. (Case 2994). O. Rieppel & P.D. Brinkmann.

(3) *Dialictus* Robertson, 1902 and *Chloralictus* Robertson, 1902 (Insecta, Hymenoptera): proposed precedence over *Paralictus* Robertson, 1901. (Case 2995). C.D. Michener.

(4) AMPULLARIIDAE Gray, 1824 (Mollusca, Gastropoda): proposed confirmation as the nomenclaturally valid synonym of PILIDAE Preston, 1915. (Case 2996). R.H. Cowie.

(5) *Gelechia glandulella* Riley, 1871 (currently *Blastobasis glandulella*; Insecta, Lepidoptera): proposed conservation of the specific name. (Case 2997). D. Adamski.

(d) *Rulings of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

Election of the President of the International Commission on Zoological Nomenclature

Prof Dr Otto Kraus has completed his six-year term of office, and to succeed him as President the members of the Commission have elected Prof ALESSANDRO MINELLI, with effect from 17 November 1995.

Prof Minelli is Professor of Zoology in the Dipartimento di Biologia at the Università di Padova, Italy. He was elected as a member of the Commission in 1989. His research interests include myriapods and planarians, and he has published extensively on general questions of biological systematics.

Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 × 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to the present. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A.

The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment should accompany orders.

Fourth Edition of the International Code of Zoological Nomenclature

A discussion Draft of a new (fourth) edition of the Code is available. Copies have been sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution, i.e. by 31 May 1996.

The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895, up to 1985; there are about 9,900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France), Prof. A. Minelli (Italy) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

International Trust for Zoological Nomenclature

Financial Report for 1994

The Trust's deficit of £4,295 for 1994 was almost entirely accounted for by fees of £4,000 that were paid for an extra half-time member of staff for six months, so that the normal work of the Secretariat could continue while the draft of the proposed 4th edition of the *International Code of Zoological Nomenclature* was prepared.

Nearly half the Trust's income came from sales of publications, mainly from the *Bulletin of Zoological Nomenclature* which yielded an income of £28,115. Sales of the *Official Lists and Indexes* and the *International Code of Zoological Nomenclature* brought the total from publications to £31,099. Income from grants remained at £9,000, but the £16,262 received from donations was £3,325 more than in 1993. Investment interest of £9,655 was £943 more than in 1993, which mainly reflected the higher rates of interest available in a building society rather than a bank deposit account for the Trust's day-to-day working funds. The total income for the year was £66,081.

The main expenditure of the Trust in 1994 was £56,669 for the salaries and National Insurance of the Secretariat of the International Commission on Zoological Nomenclature, together with fees for part-time staff. Printing of the *Bulletin of Zoological Nomenclature* and distribution of all publications amounted to £10,713. Other costs for office expenses (£2,578) and depreciation of office equipment (£416) brought the total expenditure to £70,376.

The sum of £5,592 (FFr50,000) was received in January from the Société Française de Systématique for the cost of printing the French text of the proposed 4th edition of the *International Code of Zoological Nomenclature*. The money will be held in the reserves until the new edition is printed, and does not figure in the income for 1994.

The Commission Secretariat was again housed in The Natural History Museum, whom we thank for their continuing support. The Trust wishes to express its thanks to all the donors listed below who contributed to its work during the year. Continuing support of this kind is vital if the Commission is to carry out its work for the international zoological and palaeontological community.

M.K. HOWARTH
Secretary and Managing Director
19 June 1995

List of donations and grants received during the year 1993

American Association for Zoological Nomenclature	£5,820
W. F. H. Ansell	£5
Australian Academy of Science	£439
Australian Society of Limnology	£68
Biotechnology & Biological Sciences Research Council, U.K.	£4,000
British Ecological Society	£1,000
Conchological Society	£50
European Association for Zoological Nomenclature	£1,009
Freshwater Biological Association, U.K.	£5
International Palaeontological Association	£33
Malacological Society, U.K.	£100

Mammal Society, U.K.	£50
Marine Biological Association, U.K.	£150
Medical Research Council, U.K.	£2,000
Natural Environment Research Council, U.K.	£2,000
Nuffield Foundation, U.K.	£1,000
David & Lucile Packard Foundation	£965
Palaeontological Association, U.K.	£250
Paleontological Society of America	£341
Royal Danish Academy of Sciences and Letters	£103
Royal Entomological Society of London	£300
Royal Society of London	£1,000
Royal Society of Victoria	£166
Royal Zoological Society of South Australia	£100
St John's College, Cambridge	£200
Swedish Natural Science Research Council	£1,000
Swiss National Research Foundation	£2,000
Academia Sinica, Taiwan	£110
Dr J.A. Waters	£57
Zoological Societies of Japan	£941
Total	£25,262

INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1994

Income		
SALE OF PUBLICATIONS		
Bulletin of Zoological Nomenclature	£28,115	
International Code of Zoological Nomenclature	2,236	
Official Lists and Indexes	748	
	31,099	
GRANTS AND DONATIONS		25,262
SUNDRY INCOME		65
BANK AND INVESTMENT INTEREST		9,655
		66,081
Expenditure		
SALARIES, NATIONAL INSURANCE AND FEES	56,669	
OFFICE EXPENSES	2,578	
PRINTING AND DISTRIBUTION OF PUBLICATIONS	10,713	
DEPRECIATION OF OFFICE EQUIPMENT	416	
		70,376
Deficit for the year		4,295

Discussion Draft of the Fourth Edition of the *International Code of Zoological Nomenclature*: Comments

(See also BZN **52**: 228–233)

The following are amongst the comments which have been received. Further comments are invited; they should be sent as soon as possible to the Executive Secretary of the Commission. All comments received by 31 May 1996 will be fully considered by the Code Editorial Committee, whether or not they have been published in the *Bulletin*.

(1) I.M. Kerzhner & Ya.I. Starobogatov

Zoological Institute, Russian Academy of Sciences, St. Petersburg 199034, Russia

We have discussed the Discussion Draft of the new Code with several taxonomists working in our Institute, and offer some comments. Further remarks have been given to the Commission's Editorial Committee and include points of detail with which we agree.

The overriding general comment is that stability in the Code itself is of extreme importance. There is a risk that the views of a few enthusiastic but unrepresentative reformers may become imposed on the whole community. Endless changes disorient zoologists, greatly impede their work and and add to instability of nomenclature. It is well known that new nomenclatural rules are only very slowly assimilated by zoologists.

Numerous new requirements proposed in the Draft are good as Recommendations, or as working conventions for editors of journals, but if they are incorporated in the Code a significant proportion of names and nomenclatural acts published after 1996 will be unavailable for purely formal reasons. A random check of recent issues has shown that even in prestigious English-language journals no less than 15–35% of new names would not conform to these requirements! In addition, in many cases it is not easy to conclude whether or not the requirements have been met. The situation will surely not change drastically after 1996. If such a Code is adopted, many zoologists will simply not adhere to it and its international recognition will greatly decrease.

Our comments below mostly refer to the 'major' changes mentioned in the Explanatory Notes attached to the Draft, but examination shows that some other, seemingly minor, changes are actually major, in that they affect the availability or validity of names and nomenclatural acts, mostly with retroactive effect.

A general remark is that the Draft does not include, even as Recommendations, proposals for regulation of the nomenclature of taxa above the rank of superfamily (see for example Starobogatov (1991), BZN **48**: 6–18); the possibility of appending such Recommendations to the Code should be discussed.

Some specific points are as follows.

1. *Mandatory indication that a new nominal taxon is new*. This (Article 16e) is essentially a good proposal, but it needs careful examination. In the current literature practically all cases when a new nominal taxon is not indicated as such are 'unintentional' premature establishments, either by the author or his colleagues

because their papers appear in an unexpected sequence, or by persons unaware that the taxon has not yet been published. If the Commission agrees to eliminate such cases, the Code should prescribe a statement (in any form!) that the taxon is new, and that the publication does not contain expressions (e.g. 'in litt.', 'in press') showing that it was not intended to establish a new name in it. There are special cases in which we think new names should not be rejected only for the formal reason that they have not been explicitly marked as being new. These include taxa based on misidentifications (sometimes called 'nom. nov.'), or by upgrading of infrasubspecific names (sometimes called 'stat. nov.', or not indicated at all).

2. *Mandatory use of the terms 'holotype' or 'syntypes'.* We disagree. Under the proposal (Article 72c) a new species name accompanied by 'Described from many specimens collected in Europe; the holotype is in my collection' will be available, while one with even the most detailed locality and other information 'based on the male specimen now in the ... Collection' would not. '*Aus bus* sp. n. (= *Aus xus* Dupont, 1915 as misidentified by Black (1957); syntypes the specimens used by Black (not examined, original locality unknown)' would be available, but *Aus bus* sp. n. would be unavailable if accompanied by the statement 'based on the two males and three females illustrated by Black (1957), which have been examined by the author and are in the ... Museum'.

3. *Mandatory typification of ichnotaxa at genus-group level.* We agree with this proposal (Article 16d): it is a failure of the current Code not to require type species for them.

4. *Mandatory designation of the type genus of a new family-group taxon.* We disagree with Article 16c. The type genus is nearly always obvious from the family-group name itself. Hardly anybody would reject a name such as 'AIDAE fam. n., containing *Aus*, *Bus* and *Cus*', just because *Aus* was not designated 'type genus'.

5. *Mandatory comparison with named taxa.* We disagree. Under the proposed wording of Article 16a, a new name accompanied by 'similar to *Aus bus* [to which it is actually not similar] but differs in coloration [even if it does not]' will be available, while the highly useful statement 'easily distinguished from the other species of the genus (see Black, 1957) by the presence of a tubercle on the pronotum, 2-segmented tarsi (3-segmented in other species), and yellow head' would be insufficient for availability. Moreover, for a new monospecific genus (which may even represent a new monotypic family or order, which is not exceptional in palaeontology), authors will be forced to give a purely formal comparison of the new species with some other [named] obviously unrelated species of another genus (family, order). Otherwise, not only the species but also the higher rank nominal taxa based on it would be unavailable.

6. *Mandatory use of the Latin alphabet in diagnoses of new taxa.* Clearly many little-known languages use this alphabet. However, the main languages are English, French, German, Italian, Portuguese and Spanish, and if only these languages were those 'permitted' practically all papers (including those published in China and Japan) establishing new taxa would meet the requirement. However, a serious exception is the former U.S.S.R.; although the situation in Russia is changing rapidly, too soon a change (e.g. before the year 2000) would create difficulties and affect works 'in press'. We consider this should be taken into account if the proposal (Article 16b) is proceeded with.

7. *Mandatory registration of new names in the Zoological Record.* We strongly disagree with Articles 8e and 11b. The *Zoological Record* is compiled with exceptional care and completeness, and its importance is very high. Nevertheless, we can give examples from the past of works in well-known journals which have not been scanned within five years; of names placed in wrong families or orders, where they could hardly be found by specialists; of available names listed as nomina nuda, and vice versa; and so on. It is inevitable that such cases cannot be totally excluded in the future. The Draft implies that before using names first published after 1996 zoologists (including non-taxonomists!) would need to verify whether they had been registered in the *Zoological Record.* This procedure would not only be time-consuming but, for workers outside major centres, often very difficult. In our opinion the advantages of compulsory registration are much less than the disadvantages.

8. *Automatic conservation of junior synonyms, subsequent spellings and some family-group names.* We agree with the procedures proposed in Articles 23j, 33d and 35e, which make it easier to protect established usage and hence promote stability.

9. *Misidentified type species.* We agree with the proposal in Article 70b that names should be applied as required by the correctly identified species, because this is the prevailing practice, but not with the opposite solution mentioned in the Explanatory Notes and in Article 41a.

10. *Lectotype designations after 1996.* We agree that only the term 'lectotype' should be used, but not with the conditions proposed in Article 74a, such as the requirements for 'revisionary work', statements of authors' reasons, and statements of characters differentiating the species from others in the same genus [impossible in monospecific genera!].

11. *Status of neotypes following rediscovery of original type material.* We disagree with the proposal (Article 75j) that the neotype should automatically stand as the name-bearing type; in our opinion the original material should have preference, and in the rare cases where the two are not conspecific (or consubspecific) the case should be referred to the Commission. At present in about half the cases of neotype designation in the Heteroptera the original type material is rediscovered shortly afterwards, merely having been overlooked by curators.

12. *Abandonment of gender agreement between generic names and adjectival epithets.* We strongly disagree. Gender endings do not present an obstacle to information retrieval, by computer or otherwise. Nearly all adjectives fall within a few groups (*-us, -a, -um; -er, -ra, -rum; -is, -is, -e; -ster, -stris, -stre*). With regard to generic names, Neave's *Nomenclator Zoologicus* shows that two-thirds end in *-us, -a* or *-um*, and the gender of a further 10% (*-ops, -oides, -soma*, etc.) is specified in Article 31 of the Code. The genders of most remaining names can easily be found by reference to the grammatical tables appended to the Code or to dictionaries, or by analogy with names of known gender with the same ending. It is true that for some names the gender is obscure or controversial, but these are exceptional.

If grammatical gender agreement is set aside there will be many problems. For example, zoologists might have to remember that in the genus *Aus* one species is called *ater*, another *nigra* and a third *rubrum*, while in *Bus* the same epithets are used as *atra, niger* and *rubra*. Instead of bearing in mind a few grammatical rules, workers will have to memorize numerous epithets with arbitrary endings. It will be difficult to

determine what is the 'generally used' ending for the numerous epithets which are currently or recently used in more than one combination. Even more chaos, accompanied by time-consuming or impracticable searches of old literature, would be introduced by the suggestion in Article 31b that original endings should be restored in all cases.

Botanists do not apparently have difficulties with gender (and at present even retain Latin diagnoses!). Education would be preferable to connivance in ignorance, and it might be desirable to consider how the grammatical explanations in the Code could be improved.

13. *Criteria of publication.* We particularly approve the substitution of the words 'printing on paper' in Article 8 for the 'conventional printing in ink on paper' of the current Code.

14. *Abstracts of meetings as publications.* The proposal in Article 9(12) that abstracts intended only for meeting participants should not be treated as valid publications is a good idea, but the criterion is difficult to apply since copies of such abstracts often end up in libraries.

15. *Formation of family-group names from entire generic names.* We agree, but only in cases where it is necessary to avoid homonymy. As with gender (para. 12 above), it is not difficult to determine the correct grammatical stem of a generic name.

16. *Criteria for availability of names.* The criteria are divided into two categories, 'general' and 'special' conditions, and this leads to lengthening and complicated wording of several Articles. The 'special' conditions relate to actions by the Commission (Opinions and adopted Lists), and this can be stated simply; otherwise for conformity we will need to subdivide further matters (e.g. general and special conditions of type fixation).

17. *Availability of family-group names.* Articles 13a and 13b remove the current requirement that a family-group name first published after 1930 must be accompanied by a description or indication. This is a major change, which will affect many names which have been considered unavailable; however, it is contradicted by Article 13f(1) as this appears in the Draft.

(2) Curtis W. Sabrosky

205 Medford Leas, Medford, New Jersey 08055, U.S.A.

I have compared the Draft with the current Code (3rd edition) word for word. There are many little changes in words or wording, tightening and tidying rules, recommendations and examples, which generally improve the Code. Some proposals do seem unnecessary, or merely for the sake of change (or at least I cannot figure out a reason for them). I have given details of these, and of many minor matters such as cross-referencing errors, to the Editorial Committee. Some further comments follow.

Hyphenation of names of coordinate groups. The current Code follows standard English usage for compound names, placing a hyphen between two nouns used together as a unit modifier (e.g. 'a family-group name'), but omitting the hyphen when the two nouns stand alone (e.g. 'names of the family group'). The use of two nouns without a hyphen as a compound name is common practice (country home, body louse, skin cancer), as in the Draft itself (type species, case ending). However,

the Draft refers to 'the family-group' and so on. I urge return to the standard treatment of the current Code.

Family-group names. I dislike the 'flexible treatment of rules' for the formation of family-group names (Article 29c); it encourages an anything-will-go approach to determination of stems, gives official approval to errors, and introduces potential confusion into what has been a sound system which has served us well. It is true that in some taxonomic fields (e.g. fish) long-established errors in stem have become so deeply entrenched that authors are unwilling to change, but the provision relates to names of the future.

Gender and gender concord. I recognize that among taxonomists the day of competent knowledge of Latin and Greek is past. Although an 'old-timer', I know little Latin and no Greek, but I learned the rudiments of the language of the field in which I chose to work (*myia* = fly, *soma* = body, *stoma* = mouth, *pteron* = wing, and so on, together with the common gender endings of adjectives). It did not seem difficult to do. From this limited knowledge and from examples already established, plus help from the Appendices in the Code and from Roland Brown's excellent *Composition of Scientific Words*, one can devise appropriate generic names or determine genders. The proposed *List of Available and Potentially Valid Names in Zoology* could be made the basic guide for future taxonomists, and gender of generic names and gender concord could continue into the future as a routine convention.

I feel some words should be said for our present system. We should not cavalierly shed a long-established system without due reflection on its usefulness, evaluation of an abrupt change of direction, and careful scrutiny of the proposed replacement plan. The radical change of the language of scientific names proposed in the Draft has resulted in making rules more complex by the well-intentioned effort to respect — to a certain extent — the practice of the past by devising separate pre-1997 and post-1996 rules. But any protection for pre-1997 names will be upset in new combinations after 1996 (Article 31b), and conflicting zoological opinions could — and I am sure would - result in conflicting usages. I am not convinced that the Draft's plan is either necessary or desirable, and it adds complexity.

Misidentified type species. The problem is complicated by being treated at some length in four different places, which may not seem always to agree: Article 41 (Misidentified type genera), Art. 61e (Misidentified name-bearing types), Art. 65b (Misidentifications in type genera), and Art. 70b (Misidentified type species). The provisions have been made more wordy and complex by dealing also with the overlooking of valid type fixations: misidentification and oversight are different problems and should be dealt with separately. I have suggested to the Editorial Committee some ways in which this could be done.

It has been my observation that authors who discover misidentifications of type species have usually treated as type the taxonomic species that was actually concerned when the fixation was made, although without referring the case to the Commission (as the Code has long required them to do). In 1984 I discussed this (BZN **41**: 156–158) with examples, and proposed an amendment to Article 70 which would automatically ratify this practice, although leaving cases open to challenge. The then Commission Secretary (Richard Melville) published some reservations (BZN **41**: 158) and my proposal has not been adopted. The provisions in this Draft do not please me. I continue to believe that in cases of misidentification the

'automatically' selected type species should be the nominal species corresponding to the taxon that was actually used as the basis for the nominal genus.

(3) Alain Dubois

Laboratoire des Reptiles et Amphibiens, Muséum national d'Histoire naturelle, 25 rue Cuvier, 75005 Paris, France

I do not think discussion of the new Code should be done with haste: the Commission should leave time for the international community of zoologists to consider the issues in detail. A decision taken too quickly and without the consent of the vast majority would risk breaking the community in two, those who would follow the new Code and those who would continue with the previous one. This would be a most retrograde step indeed.

One of the basic principles of the Code is that of priority; in the overwhelming majority of cases use of this principle serves the major aim of ensuring universality and stability of nomenclature. It is true that in some cases the 'rediscovery' of a name long forgotten (usually 'forgotten' simply because subsequent authors have not done their work properly) may have a real disrupting effect, but this risk is greatly overstressed by recent authors who are in favour of replacing the rule of priority by a 'rule of usage'. I fully agree that some names in *general* use (outside pure taxonomy) should be protected, but such cases should be exceptional.

In both the current Code (Article 79c) and the Draft (Articles 23j and 79c; see also Article 33d) the criteria for rejection of a 'forgotten' name are that it must not have been used as valid by a single author during the 50 years before an application to the Commission and that within this period the junior synonym must have been used by at least 5 authors in 10 publications. In my opinion these criteria are far too lax.

I believe the number of authors using the junior name should be at least 25, and furthermore that they should be *independent* of each other. If a group of workers is large, prolific or financially fortunate they may publish many papers and their practice may wrongly appear to constitute 'general usage'; to eliminate this I suggest that any workers who have published together on a taxonomic field should constitute a single group, to be counted only once for the purpose of assessing the total of 25 independent authors. Furthermore, I believe that the total number of publications using the junior synonym should be at least 100, and only those appearing before the published rediscovery of the 'forgotten' junior synonym should be counted; this will avoid the deliberate manipulation of 'general usage'. For the same reason the 50-year period should also refer to the time before the published rediscovery.

I contend that the criteria above are minimal, and that it is ridiculous to claim that a name not meeting them has 'current general usage'. Names not meeting them should not be eligible even to be considered for conservation by the Commission.

(4) Carl J. Ferraris, Jr.

Department of Ichthyology, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118, U.S.A.

Article 16a of the draft Code says that, in order to be available, a new name published after 1996 must be accompanied by 'the characters that ... differentiate the

new nominal taxon from other taxa of the same rank within the higher taxonomic category; those taxa must be explicitly cited by name'. The key word is 'other'. Does this mean one other, some other, or *all* other? Valid taxa, or nominal taxa? This wording leaves open the possibility that someone will conclude that an otherwise perfectly acceptable name is unavailable because one or more nominal taxa (valid or not) had not been explicitly mentioned. It would raise especial difficulties in large genera, or in groups in which the validity of some of the included taxa is hotly disputed. I consider the proposal should be dropped: the present (and draft: Article 13a) requirement for words 'that are purported to differentiate the taxon' is adequate.

(5) Gary Rosenberg

Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, Pennsylvania 19103–1195, U.S.A.

Ever since there has been a Code of Zoological Nomenclature it has been possible to determine whether a name is [permanently] available as soon as it is published. Under the 'five-year rule' in Article 11b, however, some names will become available immediately on publication but then become unavailable five years later. Inevitably some such names will have come into general use. I recommend that any name properly published in a work that the *Zoological Record* scans be automatically available. Such publications are listed in *Zoological Record Serial Sources*, the 5th edition of which noted that in September 1994 there were 6,564 serials on the scanned list. This would enable authors to choose a medium of publication that would immediately make their names permanently available. It would also mean that the *Zoological Record* would not be swamped with offprints from serials already scanned.

Article 16b of the Draft says that 'A diagnosis ... or a type fixation published after 1996 must be in a language using the Latin alphabet'. The Code should be more specific: many such languages are very little known. However, to require a particular language would result in many poor or incomprehensible descriptions due to authors' unfamiliarity with that language. I recommend that the new Code specify that original descriptions be published in English, French, German or Spanish, the most widespread languages using the Latin alphabet. This would allow authors to use the language in which they are best able to provide a description.

(6) Alan R. Kabat

National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, U.S.A.

The Draft of the new Code states (Article 9(12)) that 'abstracts of ... meetings, ..., etc.' do not constitute publication'. I can think of several names of mollusks which were validly established in such abstracts, and no doubt every major animal group has some. Surely the requirement should not be retroactive, and it should be reworded to apply only to post-1996 abstracts.

(7) Terry S. Arnold
2975 B Street, San Diego, California 92102, U.S.A.

It would be better not to automatically exclude abstracts (whether of meetings or not) as 'unpublished'. Some abstracts appear in journals and contain enough information to define names, whereas all too many ordinarily published papers are too vague to be useful. However, it might be appropriate for Recommendation 8D to suggest that journals and other publications carrying abstracts of past (not only forthcoming) meetings should carry a disclaimer (cf. Article 8b) stating that their abstracts are not validly published for nomenclatural purposes.

(8) Philippe Bouchet
Muséum national d'Histoire naturelle, 55 rue de Buffon, 75005 Paris, France

Article 13a of the Draft excludes family-group names from the requirement that a description or definition (or a reference to such) must be given to make a name published after 1930 available; see Article 13f(1), however. W.J. Bock (1994; *Bulletin of the American Museum of Natural History*, **222**: 1–281) has pointed out that the 1961 edition of the Code imposed this requirement retroactively, but that most [avian] family-group names published after 1930 lack accompanying descriptions. The current Code continues the provision. I agree with Bock in that the requirement should not apply to family-group names published between 1931 and 1961, but the Draft goes too far. As the Code has evolved during the 20th-century it has become progressively stricter in its requirements for new names, and it is not opportune to become more lax. The 1st, 2nd and 3rd editions make it mandatory that *all* names should have a diagnosis; the 4th edition should maintain this, but in the case of family-group names the starting point should be 1961, not 1997 as proposed in Article 16 of the Draft.

(9) Wolfgang Wüster
School of Biological Sciences, University of Wales, Bangor LL57 2UW, U.K.

One of the alternatives offered under Article 31b calls for the original endings of adjectival epithets to be used invariably after 1996. It would be insanity to change all specific epithets back to the gender form used in their original descriptions! This would require changing the spelling of the names of countless thousands of species for a purely procedural reason. This is the very antithesis of the nomenclatural stability that the Code should be promoting.

(10) Neil L. Evenhuis
Bishop Museum, Honolulu, Hawaii 96817, U.S.A.

As a matter of procedure (or rules) we currently treat the orthography of scientific names in a particular way. The proposal that original gender endings should always be returned to is just another procedure — simply that, when we publish about a

species, we write the epithet in its original spelling. Of course, the more species we treat (such as in catalogs, checklists) the more we would have to search out original descriptions and orthographies. This (looking up original descriptions) is surely a normal procedure in good taxonomy anyway.

(11) Maurizio Pavesi

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The treatment of generic names as words having no gender would mean the abandonment of the Latin language as the basis of zoological nomenclature. In these circumstances, why not give up binominal names and replace them with an alphanumeric coding system? Some authors and users of data storage systems would be enthusiastic! In my experience, zoologists who are so 'little at ease' with Latin that even with the help of the Code they are unable to treat epithets properly are at most a tiny minority, and there is no reason why the majority should have to conform with them.

Such a change would would not promote nomenclatural stability; it would cause gigantic confusion. This would be especially true if the original endings of epithets had always to be used (the first alternative in Article 31b). In entomology there are hundreds of thousands of nominal species-group taxa, and it is simply unthinkable that authors of large works such as regional faunal catalogues, which deal with hundreds or thousands of long established species, will attempt the research to find the original ending of each and every epithet. It would be a huge and pointless task. Similar problems would arise with the second alternative whenever new combinations were proposed.

Under the draft proposals these would not arise for epithets established after 1996. However, there still would be grammatically inconsistent names such as *Xum aus*, *Xum bea cus*, and so on. The supposed (but absolutely hypothetical) greater convenience of a few [how many?] users of data retrieval systems would not justify the adoption of such an absurd nomenclatural system, which would be largely disregarded. In any case different gender endings do not cause problems to data retrieval systems; it is only necessary to search under '*punctat*' to find *punctatus*, *punctata* and *punctatum* (just as *smithi* could find *smithii* also).

The changing paradigms of biological systematics: new challenges to the principles and practice of biological nomenclature

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'Biological nomenclature is supposed to deal with names alone, not with concepts, but historical examples show how wrong this idea can be' (Stevens, 1994, p. 488).

In all departments of science it is sometimes profitable to distance oneself from the day-to-day practice, and to reflect upon the nature and the theoretical foundations of our work. This is also true of biological nomenclature, and in this field these are times of change. The draft of the fourth edition of the *International Code of Zoological Nomenclature* has been circulated and is being discussed. The debate is also lively in botany, as may be seen from the last few volumes of *Taxon*, while a forthcoming *Code of Bionomenclature* is on the horizon (Hawksworth et al., 1994). Therefore, some refreshed (or refreshing) thought on the basic aspects of bionomenclature seems to be timely.

'It is hardly surprising that major changes in nomenclature tend to occur when there are major changes within systematics' (Stevens, 1991, p. 164). Is there is any correspondence, or agreement, between the major approaching changes in nomenclature and the current wide-ranging labour affecting all aspects, both theoretical and practical, of biological systematics (Minelli, 1993)?

How far is nomenclature truly independent from taxonomy?

In this most general question I do not refer to the nomenclatural consequences of the most usual kinds of taxonomic decisions, e.g. whether to regard two nominal species as distinct or not, or whether to place them in the same genus rather than in two different genera. In this area, things are mostly running in a satisfactory way, and some of the revised provisions in the proposed new Codes will certainly help smooth out a lot of residual difficulties.

I do not refer here either to operationally large, but theoretically minor, problems such as the nomenclature of ambiregnal organisms. For these (some thousands of taxa) it is a matter of taxonomic decision whether to put them under the Zoological Code or to treat them as 'plants', thus referring them to the provisions of the Botanical Code. (For a recent assessment of this aspect see Corliss, 1995).

There are, instead, much more basic questions. 'A purely nomenclatural argument may be much less common than we think, but the concepts brought to bear in such arguments are diverse. Species concepts are only one set of them, and possibly not even the most important. The whole systematic discipline, what systematists should do, and how the discipline should be organised, may also be at issue. That is surely the case now' (Stevens, 1991, p. 166).

Biological nomenclature aims to provide a universal, consistent, stable and user-friendly system of names. The question for what kinds of users these names are produced has been recently debated at length and from very different points of view (see, for example, Hawksworth & Bisby, 1988; Haskell & Morgan, 1988; Hawksworth, 1991). Much less debated, however, is what kind of objects, or

concepts, we are providing names for. But this is really the point where taxonomy stands out as the real, although seldom acknowledged, ruler of biological nomenclature.

We are accustomed to take it for granted that the (only) names with which formal biological nomenclature is concerned are those for species taxa and supraspecific taxa (genera and families at least), corresponding to the individual taxa in a hierarchical classification, but it could, or perhaps should, be otherwise.

Species names

Within the present Zoological Code there is no place for animals not obviously belonging to 'species'.

Take, for instance, hybrids. Until recently, natural hybrids were regarded as a peculiarity of the plant world, their very rare occurrence among animals being so exceptional as to be better ignored from the viewpoint of nomenclature. As for artificial hybrids, these could always be described as such by listing together the names of the parental species, thus obtaining a more definitive nomenclatural treatment than the still uncertain names we use for some domestic animals (Groves, 1995). However, our traditional view of natural animal hybrids has changed as a consequence of the progress of cytogenetics, more recently complemented by biochemical and molecular studies. There are, naturally occurring, many hybrid forms which are at least as stable and well-circumscribed as many conventional species. In terms of nomenclature, these forms are often denoted by formulae, rather than by Linnaean names, but there is no universality of attitude towards them. Echelle (1990a, b), for instance, argues that the 'non-Mendelian species' of hybridogenetic fishes and reptiles should be treated, from the point of view of nomenclature, as are the usual 'Mendelian' species.

Besides hybridogens, there are several other classes of uniparentally reproducing animals (and plants) which are usually given conventional species names. They are quietly listed in catalogues, or keyed out in monographs, in a way not different from that for the other named 'species'. The potential dangers of this uniform taxonomic treatment (Minelli, 1993) are hardly lessened by the fact that these uniparental 'species' are sometimes called — in some groups at least — agamospecies or microspecies, rather than species. According to several authorities (e.g. Dobzhansky, 1937; Mayr, 1969; Hull, 1980; Ghiselin, 1987), however, these organisms *do not form species*. If we agree with this view, how can we accept that they are named as if they *are* species?

At a recent (April 1995) workshop in Cardiff, sponsored by the Systematics Association, some two dozen taxonomists gathered to discuss 'The Species in Practice', as experienced by specialists working with organisms as different as viruses and bacteria, flowering plants and insects, mammals and freshwater fishes. The conclusion (Claridge & Dawah, in press) was that the entities uniformly treated as species under the nomenclatural principles of the Codes are extremely heterogeneous. This heterogeneity is only partly dependent on the different personal attitudes of the specialists or the different taxonomic traditions prevailing in the different groups. To be sure, substantial differences in attitude and tradition are there, but these are of minor importance when compared with the real differences in the ontological status of the basic taxonomic units we call species in the very diverse groups of organisms.

This means that many statistics involving species numbers must be looked at very cautiously, and sometimes even be rejected as nonsense. For instance, in discussions dealing with biodiversity and the current state of our inventory of the living world, we are accustomed to offer, or to read, such estimates as 'vertebrates are 2.5% of the living species named to date', as if 'species' were 'the same' [whatever this expression may biologically mean] in birds and bacteria, rotifers and reptiles!

The same with fossils. We are seldom ready to vigorously react, as we indeed should do, when somebody tells us that the named fossil species are, say, one in 10,000 of the cumulative number of species the Earth has generated since the primeval past. This 1:10,000 ratio is just a ratio between the size of an actual list of names and the size of another potential list. However, these two lists would deal with two different kinds of entity, quite apart from the objections we could easily raise as to the nature, or the homogeneity, of the entities within each one of them.

In the face of such current examples of lack of critical attitude I do not need to develop much theoretical argument. There is, however, the need to stress that such basic misconceptions stem largely from a less than critical attitude towards biological nomenclature. We cannot rightly blame the users of nomenclature for adding together apples and cherries when we, the producers of taxonomy and taxonomic nomenclature, knowingly conceal the amazing and still problematic diversity of objects and concepts under the obscuring veil of one and the same kind of names (Linnaean binomina).

To be sure, the scientific literature already abounds with evidence that Linnaean binomina are not always the best way of unambiguously conveying our appreciation of the taxonomic identity and status of the organisms we deal with. Formulae where a generic name is followed by an accession number or a locality name are not at all rare in papers dealing with molecular systematics or cytogenetics of some critical species groups. In many cases, the use of formulae rather than formal species names is not an expression of contempt towards traditional systematics and nomenclature, but the confessed perception that not everything in the living world fits neatly into our traditional taxonomic schemes.

Supraspecific taxa and hierarchical classifications

It is a matter of opinion whether the views of present systematists are more diverse concerning the nature and concept(s) of species, or of supraspecific taxa. At least to some the two problems are quite one and the same (e.g. Nelson, 1989, 1994; Cracraft, 1992). I will only add two points about the links between nomenclature and our views of supraspecific taxa.

The first is that the 'genus' is likely to have a unique status, in our minds, just because of its traditional role in our binominal nomenclature: 'A quite serious shortcoming of Linnaean nomenclature is that the generic name forms the foundation for the species name. The problem is, that genera are more arbitrary and more variable than species' (de Candolle, (1813) 1844, p. 216; my translation).

The second point is that the Linnaean hierarchy does not appear to be compatible with some attitudes, less conventional but nonetheless legitimate, towards biological systematics. Voices of discomfort have been raised many times, ever since Linnaeus, but these days such voices are distinctly more frequent and loud. This is not the place to critically review this kind of literature. I just point here to one of the theoretical

positions that induces some systematists to advocate something other than the Linnaean hierarchy and nomenclature. This position corresponds to the claim that classification in the traditional sense is a legitimate, but not necessarily the only or the primary, way of representing the outcome of systematic research. Griffiths (1974) was the first, to my knowledge, to argue that application of the Hennigian phylogenetic principles necessarily leads to the production of a *system* of hierarchically branching monophyletic units. The ontological status of the system is not the same as that of the traditional *classification*. A classification is a set of hierarchically nested subsets, or classes, whereas the system is a whole, of which the branches (from the major ones down to the terminal tips) are parts, or parts of parts. I refer to Griffiths (1974), Hennig (1975), Ax (1984), de Queiroz (1988) and Minelli (1991) for more details. It is enough, here, to refer to Griffiths's (1976) conclusion that adopting a phylogenetic approach to biological systematics means discontinuing the use of the formal Linnaean ranks.

From a palaeontological perspective, Willmann (1988, p. 901) has clearly expressed a concurrent idea: 'Neontologists as well as palaeontologists have been trapped by one aspect of the current classification of organisms, namely the ranking of taxa. Following Linné, the neontologists used to deal with ranks such as orders, suborders, classes, etc. Essential in ranking is the extent of the differences between the (recent members of) the groups. Fossils have often narrowed these gaps, and according to the theory of evolution originally no such gap ever existed. The categorial ranks, however, remained. From this resulted the problem of the origin of 'classes' and 'orders'. There are however no 'orders' or 'classes', 'genera', 'families' or 'suborders' as real units of Nature, these are artificial mental constructs dating from pre-evolutionary times. They are of no use in modern biology, mere anachronisms, not even necessary for the systematization of life ... It thus seems medieval when Stanley wrote as late as 1978 (p. 36) 'if genera typically arise by quantum speciation ... then families, orders, and classes must arise in the same manner, normally by several discrete steps"'.

de Queiroz & Gauthier (1990, 1992, 1994; see also de Queiroz, 1992) have provided a well-argued discussion of a possible 'phylogenetic system of biological nomenclature'. Their proposal does not affect the nomenclature of species (the terminal taxa in the phylogenetic system), but requires a completely new way of dealing with supraspecific taxa. The problem is that 'under evolutionary interpretations of higher taxa and their names, the current system fails to accomplish its own stated purposes' of providing explicit, universal and stable taxon names (de Queiroz & Gauthier, 1994, p. 27). These authors claim that the definition of supraspecific taxon names should follow rules other than the current reference to Linnaean categories and nomenclatural types (e.g. to the genus *Agama* as the type genus of the family Agamidae). Instead, they suggest (pp. 28–29) a 'phylogenetic definition of taxon names ... in terms of common descent and the phylogenetic entities deriving their existence from that process. For example, the name 'Agamidae' might be defined as the clade stemming from the most recent common ancestor of *Agama* and *Leiolepis*'. They are sensible enough to consider whether such phylogenetically defined taxa would accord with the principle of preserving freedom of taxonomic thought and action. Happily, they offer an affirmative answer to this question, pointing to the fact that taxonomists must still subjectively determine the contents and diagnostic characters of taxa.

This radical approach to the nomenclature of supraspecific taxa would probably answer many problems recently raised from within the ranks of cladists. For instance, Meier & Richter (1992) have argued that the current usage of taxon names is ambiguous, because the same name is sometimes used for taxa including the stem lineage and sometimes for the crown taxa only.

We must expect that the developments of cladistics will increasingly ask for a revised biological nomenclature. Other, not necessarily overlapping, requests can be expected from other corners of the wide world of systematists. Science generates concepts, concepts need names and names are very effective in shaping (and concealing) ideas. To be sure, all these unconventional propositions are unlikely to generate in the near future a viable reformulation of the current Codes or a self-consistent alternative to them. History shows that the transition from the pre-Linnaean polynomial nomenclature to the Linnaean binomina was not accomplished overnight. It took decades from the pioneering efforts of Strickland and de Candolle to establish full-fledged International Codes of nomenclature. Therefore, all these critical attitudes towards the Linnaean (pre-evolutionary) nature of biological nomenclature must be approached without anxiety and with a constructive attitude. To be sure, we should never throw away two centuries of names, with all the associated information, taxonomic and other! I am delighted to see that most recent advances in phylogenetic systematics have been accomplished without much nomenclatural trouble, at the species level at least. Things are different, however, at the higher levels, where the use of rank terms such as order or class is quite often abandoned: what is left is just place for an open sequence of relative ranks, such as the 15 levels recognised by Ehlers (1985, p. 168) between Plathelminthes (traditionally, a phylum) and the two sister groups Caryophyllidea and Eucestoda (traditionally, two subclasses or the like).

Nomenclature in the service of science

To sum up, I welcome change. By this I do *not* mean changes of animal and plant names for purely 'nomenclatural' reasons; so far as these are concerned, I cannot but side with the users of nomenclature. These are a very wide community to which we, producers of names included, all belong. Systematists are something more than mere name producers, steadily struggling with, or sometimes shaking hands with, the users of names. We systematists are people involved in the development of an old but today very lively science. Change, therefore, is by necessity the stuff of our professional life: change of concepts, of paradigms, of goals to achieve. Looking at the century-long stability of angiosperm taxonomy which followed Antoine-Laurent de Jussieu and Augustin-Pyramus de Candolle, Stevens (1994, p. 221) has recently commented: 'I will suggest that a distrust of theory, a system of instruction that is similar to an apprenticeship and a tendency to look to past masters of the discipline for justification are interconnected factors leading to stasis.'

Things are perhaps a little bit better now, but we have on our shoulders, as systematists, the full responsibility of looking for sound policy in taxonomy as well as in nomenclature. We must be well aware of the deep interconnections between science and names. We face the formidable task of improving the independence and creativity of our discipline while, at the same time, promoting and improving the stability of names.

Haskell & Morgan (1988), Minelli (1991, 1993) and Bogan & Spamer (1995) see, either with approval or with anxiety, that a possible outcome of current trends in bionomenclature could be the development of a 'systematic bipartisan nomenclature', one side of it being for the specialists (systematists), the other side for the users. Whatever the future, we shall need a complex nomenclatural machinery. With this prospect, we should wholeheartedly welcome proposals such as the principle of registration of new names and the production of species lists that are being offered as operational improvements of the current Codes, i.e. as the keystones of the biological nomenclature of the (near) future.

But that is not the end of the story. With the launch of a fourth edition of the International Code of Zoological Nomenclature and with an active involvement in the production of a Code of Bionomenclature, the International Commission on Zoological Nomenclature, and the zoological community at large, are making a more substantial step forward than ever in the past. The next steps, however, will really need to be a jump or several jumps. To avoid breaking our old bones it would be prudent to start studying all the aspects of the landscape we have to go through.

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Case 2952

Paraphronima crassipes Claus, 1879 (Crustacea, Amphipoda): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the name *Paraphronima crassipes* Claus, 1879 for a pelagic amphipod (family PARAPHRONIMIDAE) which is widely distributed in tropical and temperate seas. The specific name is in universal usage but is threatened by the senior subjective synonym *Hyperia pedestris* Guérin-Méneville, 1836, unused for over a century.

Keywords. Nomenclature; taxonomy; Amphipoda; *Paraphronima crassipes*; pelagic amphipods.

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1. The specific name of *Hyperia pedestris* was established by Guérin-Méneville (1836, Crustacés, pl. 25, fig. 6) for a specimen found off the coast of Chile. A brief description was published in 1844, on p. 22 (Crustacés) of vol. 3 of the same work. The correct date for the foundation of species described in this work has been debated. Stebbing (1888, p. 162) says 'This work was published in livraisons between 1829 and 1844. The Plates containing Amphipoda probably all belong to the early part of 1836. An advertisement in the 'Quarante-cinquième livraison. Crustacés. Pl. 35,' says 'La 46e et dernière livraison se composera du Texte descriptif de l'Iconographie et paraîtra fin mars 1838,' but the promise was not, it appears, fulfilled till the end of 1843. The specific names, however, being given on the Plate, will carry the date 1836'. The date is confirmed by the reference made by Lucas (1836) when reporting Guérin-Méneville's species.

2. The specific name of *H. pedestris* has only been used in the scientific literature on two other occasions, firstly in the repetition (Lucas, 1845, p. 111) of the brief description given in the Lucas (1836) reference and secondly when Bovallius (1889, p. 25) discussed the species, relying only on Guérin-Méneville's work, and placed it in the genus *Paraphronima* Claus, 1879. Since then the name has been ignored, probably due to the apparent loss of type material and the inadequate original figure and description.

3. During a recent survey of invertebrate type specimens in the Academy of Natural Sciences of Philadelphia much of Guérin-Méneville's crustacean type collection was rediscovered (Spamer, 1990; Spamer & Bogan, 1992), including the type of *Hyperia pedestris*. I have since examined the hyperiid amphipods of that collection (Zeidler, in press) and concur with Bovallius (1889) that *H. pedestris* is a species of *Paraphronima*. Unfortunately the type is virtually destroyed, the desiccated remains having been stuck to the bottom of the original vial but now removed. Under the microscope none of the appendages could be seen clearly but the pereonites and

pleonites were characteristic of *Paraphronima*. The figure of Guérin-Méneville (1836) and what I could make of the epimeral plates indicate that the species is most likely the same as *P. crassipes* Claus, 1879.

4. The nominal species *Paraphronima crassipes* was established by Claus (1879, p. 7, pl. 1, figs. 6–9; pl. 2, fig. 10), who gave a relatively brief description and good figures of the male and female. It is a relatively distinctive species and is readily distinguished by the shape of the epimeral plates from its only currently recognised congener, *P. gracilis* Claus, 1879. It is quite common in tropical and temperate seas. Selected citations are Reid (1955, p. 15, fig. 3), Hurley (1960a, p. 113; 1960b, p. 280), Pillai (1966, p. 210, fig. 4), Dick (1970, p. 54, fig. 5), Yoo (1971, p. 51), Thurston (1976, p. 407), Brusca (1981, p. 40, fig. 6a, c), Vinogradov et al. (1982, p. 258, fig. 127), Young & Anderson (1987, p. 712, fig. 3), Vinogradov (1990, p. 59) and Zeidler (1992, p. 97).

5. The rediscovery of Guérin-Méneville's type of *Hyperia pedestris* and my examination confirming it to belong to *Paraphronima*, and most likely to *P. crassipes*, raises the possibility of replacing the specific name *crassipes* by the senior subjective synonym *pedestris*. However, the name *pedestris* has remained unused in primary literature since Bovallius (1889; see para. 2 above) treated *P. pedestris* as a species separate from *P. crassipes* (which he discussed on pp. 30–32), and the work of the past century has not confirmed the existence of distinct taxa to which the two names might be applied. Adoption of the earlier name would cause unnecessary confusion and under Article 79c of the Code there is a prima facie case for its suppression.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *pedestris* Guérin-Méneville, 1836, as published in the binomen *Hyperia pedestris*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *crassipes* Claus, 1879, as published in the binomen *Paraphronima crassipes*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *pedestris* Guérin-Méneville, 1836, as published in the binomen *Hyperia pedestris* and as suppressed in (1) above.

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Case 2975

Metaphycus Mercet, 1917 (Insecta, Hymenoptera): proposed precedence over *Aenasioidea* Girault, 1911

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Abstract. The purpose of this application is to conserve the well-known name *Metaphycus* Mercet, 1917 for a genus of parasitic wasps (family ENCYRTIDAE) by giving it precedence over the senior subjective synonym *Aenasioidea* Girault, 1911. The latter name is considerably less well known. A number of *Metaphycus* species are of economic importance.

Keywords. Nomenclature; taxonomy; Hymenoptera; parasitic wasps; *Metaphycus*.

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1. In 1911 Girault (p. 171) established the genus *Aenasioidea*, with type species *Aenasioidea latiscapus* Girault, 1911 (p. 173) by original designation and monotypy, from Illinois, U.S.A. The species was described from six female specimens housed in the Illinois Natural History Survey, Urbana. Frison (1927, p. 217) designated a dry mounted specimen as the lectotype.

2. Mercet (1917, p. 138) established *Metaphycus* as a subgenus of *Aphycus*, with type species *Aphycus zebratus* Mercet, 1917 (p. 138, fig. 6) by monotypy, from Spain. A slide specimen in the Instituto Español de Entomologia in Madrid might be a syntype of *Aph. zebratus* (see Noyes, 1981, p. 169). *Metaphycus* was elevated to generic rank by Mercet (1925, p. 28) and since that time has been regarded universally as a valid genus in the family ENCYRTIDAE (Hymenoptera, CHALCIDOIDEA).

3. A recent examination by us of the lectotype of the type species of *Aenasioidea* Girault, 1911 has shown that it is so closely related to the type species of *Metaphycus* Mercet, 1917 that the two genera can no longer be considered as distinct. The name *Metaphycus* must therefore be considered a junior subjective synonym of *Aenasioidea* (see Noyes & Woolley, 1994, p. 1329).

4. The name *Aenasioidea* Girault, 1911 has been used as valid in fewer than 30 separate publications and is currently used in combination with no more than 10 species names that are considered valid. Only two of these names are used correctly in combination with *Aenasioidea* in its narrowest sense. No species are considered to be of economic importance.

5. In contrast, *Metaphycus* Mercet, 1917 has been used as a valid name in at least 350 separate publications and is currently used in combination with more than 220

species names that are considered valid. It is one of the best known generic names in the superfamily CHALCIDOIDEA and includes many species of economic importance. Noyes & Hayat (1994) listed 25 species of *Metaphycus* that have been used in classical biological control programmes in various parts of the world. Many other species are of potential economic importance because they are parasitoids of scale insects (Hemiptera, COCCOIDEA). The name *Metaphycus* has been adopted in the following recent representative works: Tachikawa (1963), Trjapitzin (1975), Annecke & Mynhardt (1981), Gordh (1979), Hayat (1986) and Viggiani & Guerrieri (1989). A list of 345 further publications in which *Metaphycus* has been used as a valid name, dating from 1926 to 1994 and involving well over 200 additional authors, has been deposited with the Commission Secretariat.

6. We (Noyes & Woolley, 1994, p. 1329) treated the name *Aenasioidea* Girault, 1911 as if it were an invalid junior synonym of *Metaphycus* Mercet, 1917 with the comment that the case would be sent to the Commission for a ruling. We will continue to use *Metaphycus* as the valid name pending a decision by the Commission in accordance with the recommendation of Article 80 of the Code.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to give precedence to the name *Metaphycus* Mercet, 1917 over the name *Aenasioidea* Girault, 1911, whenever the two are considered to be synonyms;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Metaphycus* Mercet, 1917 (gender: masculine), type species by monotypy *Aphycus zebratus* Mercet, 1917, with the endorsement that it is to be given precedence over *Aenasioidea* Girault, 1911 whenever the two names are considered to be synonyms;
   (b) *Aenasioidea* Girault, 1911 (gender: feminine), type species by monotypy *Aenasioidea latiscapus* Girault, 1911, with the endorsement that it is not to be given priority over *Metaphycus* Mercet, 1917 whenever the two names are considered to be synonyms;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *zebratus* Mercet, 1917, as published in the binomen *Aphycus zebratus* (specific name of the type species of *Metaphycus* Mercet, 1917);
   (b) *latiscapus* Girault, 1911, as published in the binomen *Aenasioidea latiscapus* (specific name of the type species of *Aenasioidea* Girault, 1911) and as defined by the lectotype designated by Frison (1927).

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Case 2995

Dialictus Robertson, 1902 and *Chloralictus* Robertson, 1902 (Insecta, Hymenoptera): proposed precedence over *Paralictus* Robertson, 1901

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Abstract. The purpose of this application is to give the much-used halictine bee generic (or subgeneric) names *Dialictus* and *Chloralictus*, published by C. Robertson in February and September 1902 respectively, precedence over the little-used name *Paralictus* published by Robertson the previous year.

Keywords. Nomenclature; taxonomy; halictine bees; *Dialictus*; *Chloralictus*; *Paralictus*.

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1. Robertson (1901, p. 229) established the nominal genus *Paralictus* for a small group of cleptoparasitic halictine bees. He designated as type species *Halictus cephalicus* Robertson, 1892 (p. 270); however, the name of this is a junior primary homonym of *H. cephalicus* Morawitz, 1873 (p. 173) and Dalla Torre (1896, p. 57) provided *H. cephalotes* as a replacement name.

2. In 1902 Robertson proposed two names for close nonparasitic relatives of *Paralictus*; these names are *Dialictus* (1902a, p. 48; type species *H. anomalus* Robertson, 1892, p. 272) and *Chloralictus* (1902b, p. 245; type species *H. cressonii* Robertson, 1890, p. 317), published in February and September 1902 respectively.

3. *Paralictus*, *Dialictus* and *Chloralictus* have been treated as genera, or as subgenera of *Lasioglossum* Curtis, 1833 or *Halictus* Latreille, 1804. *Dialictus* and *Chloralictus*, often but not always considered synonyms under the former name, have been used in dozens of works, relating to about 265 nominal species in the western hemisphere and a smaller number in the eastern hemisphere, not only in taxonomic and ecological literature, but also in diverse papers on behavior and origins of social behavior, and in books on these topics. Examples of works which illustrate usage are Mitchell (1960), Wilson (1971), Michener (1974), Wilson (1975), Hurd (1979), Moure & Hurd (1987), Michener (1990) and Michener, McGinley & Danforth (1994). Their bibliographies give further references, and a list of a further 13 works by various authors has been given to the Commission Secretariat. *Paralictus*, however, has been used uncommonly except in catalogues and faunal works because the five included species are uncommon.

4. *Paralictus* may or may not be a monophyletic group; it is clearly derived from *Dialictus*/*Chloralictus*. *Paralictus*, *Dialictus* and *Chloralictus* are now regarded as synonymous (Michener, in preparation). If names in use were altered because of the priority of *Paralictus*, the current generic or subgeneric placement of some 300 species would change from *Dialictus* or *Chloralictus* to *Paralictus*. Especially because the

name *Dialictus* has been so much involved in works on behavior and the evolution of social behavior, such changes would be contrary to stability of nomenclature.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that the names *Dialictus* Robertson, February 1902 and *Chloralictus* Robertson, September 1902 are to be given precedence over *Paralictus* Robertson, 1901 whenever they are considered to be synonyms of it;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Dialictus* Robertson, 1902 (gender: masculine), type species by monotypy and original designation *Halictus anomalus* Robertson, 1892, with the endorsement that it is to be given precedence over *Paralictus* Robertson, 1901 whenever the two names are considered to be synonyms;
   (b) *Chloralictus* Robertson, 1902 (gender: masculine), type species by original designation *Halictus cressonii* Robertson, 1890, with the endorsement that it is to be given precedence over *Paralictus* Robertson, 1901 whenever the two names are considered to be synonyms;
   (c) *Paralictus* Robertson, 1901 (gender: masculine), type species by original designation *Halictus cephalicus* Robertson, 1892 (a junior homonym of *Halictus cephalicus* Morawitz, 1873 and replaced by *Halictus cephalotes* Dalla Torre, 1896), with the endorsement that it is not to be given priority over *Dialictus* Robertson, 1902 or *Chloralictus* Robertson, 1902 when it is considered to be a synonym of them;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *anomalus* Robertson, 1892, as published in the binomen *Halictus anomalus* (specific name of the type species of *Dialictus* Robertson, 1902);
   (b) *cressonii* Robertson, 1892, as published in the binomen *Halictus cressonii* (specific name of the type species of *Chloralictus* Robertson, 1902);
   (c) *cephalotes* Dalla Torre, 1896, as published in the binomen *Halictus cephalotes* (valid replacement of the specific name of *Halictus cephalicus* Robertson, 1892, the type species of *Paralictus* Robertson, 1901).

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Case 2984

Monograptus riccartonensis Lapworth, 1876 (Graptolithina): proposed designation of a neotype

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Abstract. The purpose of this application is to propose a neotype for *Monograptus riccartonensis* Lapworth, 1876, a graptolite upon which Tullberg (1882) based the *M. riccartonensis* Zone of Wenlock (Silurian) age. Přibyl (1948) designated as lectotype one of Lapworth's type specimens which belongs to another species and is from strata significantly older than the *M. riccartonensis* Zone.

Keywords. Nomenclature; taxonomy; graptolites; Silurian; *Monograptus riccartonensis*.

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1. Lapworth (1876, pp. 355–356, pl. 13, figs. 2a-e) described a new species of monograptid, *Monograptus riccartonensis*, from the Silurian of the British Isles.

2. Tullberg (1882, p. 15) established the *Monograptus riccartonensis* Zone in Sweden. This zone was subsequently recognized by Elles (1900, pp. 375–376) in her classic paper 'The zonal classification of the Wenlock Shales', and incorporated by Elles & Wood (1914, p. 526) in their table 'Vertical ranges of the zones of British Graptolitoidea'. More recently it has been included in Rickard's (1989) table of zones 'most widely in use in international correlation', and in Koren et al.'s 'generalized graptolite zonal sequence defining Silurian time intervals for global palaeogeographical studies' (in press).

3. Přibyl (1948, p. 33) designated as lectotype of *Monograptus riccartonensis* the specimen illustrated by Lapworth (1876) in pl. 13, fig. 2a. However, Strachan (1971, p. 60) has noted that 'this specimen from the Swanston collection is probably not recognizable as a figured specimen'.

4. Two of Lapworth's figured specimens (1876, pl. 13, figs. 2a-b), including the lectotype, are from Tieveshilly, County Down, Northern Ireland. Graptolitic strata of Wenlock age are not known from this locality (T.B. Anderson, pers. comm.). It is probable that Lapworth's figures were oblique views of *Monograptus priodon* (Bronn, 1835) or a related species of Telychian (Upper Llandovery) age.

5. Lapworth's other illustrated specimens (Lapworth, 1876, pl. 13, figs. 2c-e) were collected from the Riccarton Beds (of Wenlock age) from Elliotsfield, Roxburghshire, Scotland; these specimens have not been located. However, another specimen from this locality was figured as *Monograptus riccartonensis* by Lapworth (1880, pl. 4, fig. 8c) and was refigured by Elles & Wood (1913, pl. 42, fig. 8b). This specimen is housed in the Lapworth Museum, Birmingham University and is numbered BU 1585 (Strachan, 1971, p. 91). Two other specimens on the same slab were figured by Elles & Wood (1913, text-figs. 286a-b). It is this species, and not *Monograptus priodon* or

some other, which was illustrated by Tullberg (1883, pl. 2, figs. 26–27) and upon which the *M. riccartonensis* Zone is founded.

6. It is desirable that Lapworth's specific name *riccartonensis* be retained for his specimens from Elliotsfield as it is upon these that the internationally recognized *M. riccartonensis* Zone is based. I therefore propose that specimen BU 1585, figured by Lapworth (1880, pl. 4, fig. 8c), be designated as neotype of *M. riccartonensis* Lapworth, 1876.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Monograptus riccartonensis* Lapworth, 1876 and to designate as the neotype the specimen BU 1585 in the Lapworth Museum, Birmingham University;

(2) to place on the Official List of Specific Names in Zoology the name *riccartonensis* Lapworth, 1876, as published in the binomen *Monograptus riccartonensis* and as defined by the neotype designated in (1) above.

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Case 2955

Iodotropheus sprengerae Oliver & Loiselle, 1972 (Osteichthyes, Perciformes): proposed replacement of holotype by a neotype

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Abstract. The purpose of this application is to conserve the specific name of *Iodotropheus sprengerae* Oliver & Loiselle, 1972 for a small, rock-dwelling fish (family CICHLIDAE) endemic to Lake Malawi, East Africa. *I. sprengerae* is the type species of *Iodotropheus* Oliver & Loiselle, 1972. The description of the taxon was based on aquarium-reared, possibly hybridized, specimens, the original brood stock of which was purported to have been collected from Boadzulu Island in the southeast of the lake, where the species does not occur. The holotype is not within the morphological range of wild specimens. It is proposed that the type material be set aside and a wild-caught specimen from Chinyankwazi Island, where the species is now known to occur, be designated as the neotype. The species is popular as an aquarium fish and is commonly known as the rusty cichlid.

Keywords. Nomenclature; taxonomy; Osteichthyes; CICHLIDAE; rusty cichlid; *Iodotropheus sprengerae*; Lake Malawi.

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1. Oliver & Loiselle (1972, p. 310) established the genus *Iodotropheus* for a small, rock-dwelling cichlid fish endemic to Lake Malawi, East Africa. They described and illustrated (p. 310, figs. 1–7) the single included species *Iodotropheus sprengerae*, which is thus the type by monotypy. The description was based on the holotype (a mature male, catalogue no. BM(NH) 1971.9.8.5 in the Natural History Museum, London) and seven paratypes (a male and two females BM(NH) 1971.9.8.6–8 in London; and three males and one female USNM 20712–5 in the U.S. National Museum, Washington, D.C.).

2. Oliver & Loiselle (1972, p. 315) asserted that *Iodotropheus sprengerae* had been collected only at Boadzulu Island (14°11′S, 35°07′E) in the southeast arm of the lake, which is isolated by a broad expanse of sandy substrate. Boadzulu Island was thus the implicit type locality. Only in the acknowledgments (p. 319) did they state that all the type material consisted of aquarium-raised specimens, donated by aquarists, from different sources in the United States: Manhattan Beach, California; Los Gatos, California; Virginia Beach, Virginia; and Atlanta, Georgia.

3. Oliver and Loiselle presumed that the original stock exported for the tropical fish trade had originated from Boadzulu Island in southern Lake Malawi because populations of *Iodotropheus* spp. were observed there by Oliver while diving (Oliver & Loiselle, 1972, p. 316; P.V. Loiselle, personal communication); at the time of the description of *I. sprengerae* the existence of other *Iodotropheus* species was unknown to the authors. Konings (1989, p. 102; 1990b, p. 270) and Ribbink et al. (1983, p. 241) subsequently referred to *I. sprengerae* as occurring at Boadzulu, Chinyamwezi

(13°56′S, 35°00′E), and Chinyankwazi (13°53′S, 35°00′E) islands in Lake Malawi. The latter two islands are close together, whilst Boadzulu is further south. All the islands in the southeast arm of the lake show a high degree of fish endemism.

4. I (Stauffer, 1994) made a series of collections from all three islands and, utilizing morphological data, compared the population from Boadzulu Island with populations from Chinyamwezi-Chinyankwazi islands. I concluded that the two populations represented distinct species.

5. A study of the type material of *Iodotropheus sprengerae* demonstrated that it was most similar to (but not identical with) wild-caught specimens from Chinyamwezi and Chinyankwazi islands, and distinct from wild-caught material from Boadzulu Island. Thus, I (Stauffer, 1994) concluded that the population inhabiting Boadzulu Island represented a new species, which I described as *Iodotropheus declivatas*, and that *I. sprengerae* does not occur at this island.

6. I interviewed Stuart Grant, a current exporter of ornamental fishes from Lake Malawi, and discovered that the principal exporter of Malawian fishes in the early 1970s, P. Davies, the first to collect specimens of *Iodotropheus sprengerae*, was collecting fishes at all of the above three localities.

7. The locality of the original brood stock of *Iodotropheus sprengerae* is unknown but it may well have been Chinyamwezi and/or Chinyankwazi islands. The propensity for haplochromine cichlids to produce fertile hybrids in aquaria, that also backcross with the parental forms, and the mixing of wild-caught specimens with cultured ones throughout the aquarium trade, are widely recognized (Loiselle, 1971; McElroy & Kornfield, 1993, p. 934). The *I. sprengerae* holotype lies outside the morphological range of wild-caught specimens (see Stauffer, 1994, p. 335) and there is the possibility that it is the result of hybridization and/or back crosses in aquaria between individuals collected at Boadzulu Island with those collected from Chinyamwezi and Chinyankwazi islands.

8. Given the situation outlined above, one option would be to describe the taxon from Chinyamwezi and Chinyankwazi islands and that from Boadzulu Island as new species, noting that the name *I. sprengerae* (and hence *Iodotropheus*) was based on a description of aquarium-raised fishes of unknown provenance and geneology. However, fishes belonging to the genus *Iodotropheus* are easily recognized and the names *Iodotropheus* and *I. sprengerae* are commonly used in both the scientific and popular literature (see, for example, the recent works of Axelrod & Burgess, 1981; Eschmeyer, 1990; Jackson & Ribbink, 1975; Keenleyside, 1991; Konings, 1989, 1990a; Lewis, Reinthal & Trendall, 1986; Loiselle, 1985; McKaye & Gray, 1984; Ribbink et al., 1983). There are currently three recognized species of *Iodotropheus* in Lake Malawi and over time, as the Mozambique shoreline is more adequately sampled, there will undoubtedly be additional species discovered (see Stauffer, 1994). I therefore propose that the original type material of *Iodotropheus sprengerae* be set aside and a wild-caught specimen from Chinyankwazi Island (a male, no. PSU 2721, in the Fish Museum of The Pennsylvania State University), which I have described and illustrated (Stauffer, 1994, pp. 337 339, figs. 7 and 8), be designated as the neotype. This specimen is in accord with the subsequent usage of *I. sprengerae*. Such an action would be in accord with Recommendation 75E of the Code: 'Neotypes should be designated to clarify the application of names when their continued existence as nomina dubia threatens the stability of other names; if, despite the existence of a

holotype, or a lectotype, or syntypes, it is not possible to resolve a complex zoological problem, a zoologist should refer the case to the Commission which may, by the use of the plenary power, set aside the existing type material and designate a neotype.'

9. The International Commission of Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type specimen for *Iodotropheus sprengerae* Oliver & Loiselle, 1972 and to designate as neotype the male specimen PSU 2721 in the Fish Museum, The Pennsylvania State University, U.S.A.;

(2) to place on the Official List of Generic Names in Zoology the name *Iodotropheus* Oliver & Loiselle, 1972 (gender: masculine), type species by monotypy *Iodotropheus sprengerae* Oliver & Loiselle, 1972;

(3) to place on the Official List of Specific Names in Zoology the name *sprengerae* Oliver & Loiselle, 1972, as published in the binomen *Iodotropheus sprengerae* (specific name of the type species of *Iodotropheus* Oliver & Loiselle, 1972) and as defined by the neotype designated in (1) above.

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Case 2965

Siboma atraria Girard, 1856 (currently *Gila atraria*; Osteichthyes, Cypriniformes): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the specific name of *Gila atraria* (Girard, 1856), the common Utah chub of the western United States. Another of Girard's names, *Tigoma lineata*, is a synonym and has precedence due to a nomenclatural decision by Evermann & Rutter (1895); however, *lineata* has not been used in recent decades and its suppression is proposed.

Keywords. Nomenclature; taxonomy; Osteichthyes; Cypriniformes; United States; Utah chub; *Gila atraria*; *Tigoma lineata*.

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1. Girard (1856) described the new cyprinid nominal species *Siboma atraria* and *Tigoma lineata* from the western United States, on pp. 208 and 206 respectively.

2. *S. atraria* was 'found in a spring, in Utah District, near the Desert, by Lt. E.G. Beckwith'. There is a single specimen (USNM 236; standard length 125.7 mm) in the U.S. National Museum. The type locality was later restricted by Snyder (1921, p. 25) to Fish Springs, in the southern part of Tooele County, Utah.

3. *T. lineata* was also collected by Beckwith, but the type locality was not stated and the only information consists of the handwritten 'Near 38°N. lat.' on labels accompanying the extant types (see para. 7 below). Although six syntypes (USNM 229) are supposed to have existed originally (Girard, 1858, pp. 292–293), apart from a single pharyngeal arch they disappeared long ago from the USNM collection (paras. 6 and 7 below).

4. Although Jordan (1878, p. 424; also 1885b, p. 819) listed both *S. atraria* and *T. lineata* he noted the latter as being a 'doubtful species', and omitted it from other contemporary publications (Jordan, 1885a; 1891a; 1891b). *T. lineata* was not included among the synonyms of *Leuciscus atrarius* (Girard, 1856) in the last three works.

5. Evermann's paper (1893) on Montana and Wyoming fishes used (pp. 23, 46; pl. 20, fig. 3) the name *L. atrarius* for the Utah chub and did not mention *T. lineata*, but despite this Evermann & Rutter (1895, p. 483) synonymized Girard's two nominal species under the name *Leuciscus lineatus*. They gave no reason for the choice of specific name but presumably it was based on the original page priority (cf. para. 1 above). Their action qualifies as that of first reviser under Article 24a of the Code. Jordan & Evermann (1896, p. 233) noted under *L. lineatus* 'locality unknown, type lost'.

6. Following Evermann & Rutter (1895) the name *L. lineatus* was used for the Utah chub for 22 years (e.g. Lucas, 1900, pp. 223–224; Fowler, 1913, p. 71), but the

total number of references was small. Snyder (1917, p. 59) disputed Evermann & Rutter's synonymy, arguing that the slender body mentioned in Girard's original description of *T. lineata* was more typical of species of the genus *Richardsonius* Girard (1856, p. 201). This conclusion has been accepted ever since. Snyder (1921, pp. 26–27) noted that the pharyngeal arch of *T. lineata* in the U.S. National Museum with two rows of teeth (dental formula 2,4-) bears a close resemblance to pharyngeal arches of *Richardsonius hydrophlox* (Cope, 1871) (= *R. balteatus hydrophlox*), the redside shiner.

7. Although the syntypes of *T. lineata* were thought to have been lost, at least three are known to exist, all in good condition; during the 1860's they had been sent by the U.S. National Museum on exchange to other museums in this country and abroad. Fowler (1925, pp. 399–400, fig. 8) described and illustrated a type specimen (ANSP 4188) in the collection of the Academy of Natural Sciences of Philadelphia but did not comment on its supposed identity with *R. balteatus hydrophlox*; Böhlke (1984, p. 81) reported that Dr Robert R. Miller, University of Michigan, had identified this specimen as *Gila atraria*. The two other known syntypes are in the Museum of Comparative Zoology, Harvard University (MCZ 1807) and the Muséum National d'Histoire Naturelle in Paris (MNHN 394); I have identified all three specimens as being *G. atraria*.

8. Apart from the period 1895–1917 (see para. 6 above) the specific name *atraria* has been consistently used for the Utah chub for the past 139 years. This is an abundant fish throughout its range, and numerous references have appeared in both the ichthyological and fisheries literature in recent decades (e.g. Neuhold, 1955; John, 1959; Graham, 1961; La Rivers, 1962; Sigler & Miller, 1963; Carlander, 1969; Baxter & Simon, 1970; Brown, 1971; Simpson & Wallace, 1978; Wallace, 1980; Robins et al., 1991; Mayden et al., 1992). Although, following the first reviser action of Evermann & Rutter (1895; see para. 5 above), the valid name should be *Gila lineata*, to change to this from *G. atraria* would be both unnecessary and confusing; under Article 79 of the Code there is a prima facie case for suppressing the specific name *lineata*.

9. This application is supported by Drs R.M. Bailey, B.M. Burr, R.C. Cashner, B.B. Collette, S. Contreras-Balderas, W.N. Eschmeyer, D. Hendrickson, R.R. Miller, J.S. Nelson, W.F. Smith-Vaniz and J.D. Williams.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *lineata* Girard, 1856, as published in the binomen *Tigoma lineata*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *atraria* Girard, 1856, as published in the binomen *Siboma atraria*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *lineata* Girard, 1856, as published in the binomen *Tigoma lineata* and as suppressed in (1) above.

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Comment on the proposed conservation of *Porites* Link, 1807, *Galaxea* Oken, 1815, *Mussa* Oken, 1815 and *Dendrophyllia* Blainville, 1830 (Anthozoa, Scleractinia)
(Case 2900; see BZN **52**: 142–147)

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I am writing in support of Prof Donald Potts's application for the conservation of the scleractinian coral generic names *Porites* Link, 1807, *Galaxea* Oken, 1815, *Mussa* Oken, 1815 and *Dendrophyllia* Blainville, 1830.

I have been working on the taxonomy and related topics of scleractinian corals, especially those of living and fossil reefal forms, for 30 years. Fortunately, over this time there has been relative stability in the usage of most reef coral generic names, especially the most common ones, and I very much believe that this has been to the advantage of coral studies in general. Over this time the group has become recognized for its great ecological importance in tropical marine ecosystems, and its biogeography is now also one of the most thoroughly studied of all tropical marine groups of organisms.

Potts's case for the stability of the four coral names is an implicit plea for nomenclatural stability in modern science. One of the prime purposes of the taxonomist is to eliminate ambiguity of name usage, thereby enabling taxonomically-based research such as ecology, evolutionary studies and biogeography to be carried out with the minimum of nomenclatural confusion. I recognise that taxonomic changes result in name changes from time to time, but name changes should not be made purely for the sake of a legalistic application of the Code. If continuing nomenclatural stability rests on retaining names which are well founded and valid in themselves and threatened only on priority grounds as the result of researches in the antiquarian literature, then I would argue that stability must be overriding. Potts is evidently arguing from a similar point of view.

Potts emphasizes that all four genera are commonplace, widespread and ecologically important. They also have a substantial fossil record, most especially *Porites* which is often the primary, often sole, bioconstructional organism in Neogene reefs. *Porites* is probably the most common single genus in the coral record, taking fossil and extant occurrences into account. It has also become an important sclerochronological tool in climate change research. In short, '*Porites*' is the nearest in the coral world to a household name, rivalled only by *Acropora*. The colonies of *Galaxea* attain a larger size (several metres) than those of any other genus. The concepts of two of the genera, *Porites* and *Dendrophyllia*, are founded on validly designated lectotypes. All four corals, *Porites*, *Galaxea*, *Mussa* and *Dendrophyllia*, are distinctive and relatively easy to recognise by non-specialists, even in the field.

If Potts's application for the suppression of the unused senior homonym *Porites* Cuvier, 1798 were not approved, the name would remain valid, applied to one or other of the three genera now called *Galaxea*, *Mussa* or *Dendrophyllia* (para. 10 of the application). A new name would be required for the genus currently called *Porites*. It is difficult to see what would be gained from such a nomenclatural upheaval, made necessary purely on the grounds of priority. It would lead to enormous confusion for

all those coral workers who deal daily with these common species. In order to avoid such potential travails I give my wholehearted support to Potts's application.

Comment on the proposed conservation of the specific names of *Dodecaceria concharum* Örsted, 1843 and *D. fimbriatus* (Verrill, 1879) (Annelida, Polychaeta) by the designation of a neotype for *D. concharum*
(Case 2899; see BZN **52**: 27–33, 261–262)

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We write in reply to the comment by Drs Pleijel and Mackie (BZN **52**: 261–262).

The basic problem, for which we attempted to find a solution by neotype designation, is that the name *Dodecaceria concharum* has been used in two different senses: (1) as an aggregate, by those authors (e.g. Fauvel, 1927) who have lumped the 'form A' and 'form B' of Caullery & Mesnil as a single species; (2) as a segregate, by those authors who have followed Dehorne (1933) in regarding 'form B' as a distinct species, *D. caulleryi* or *D. fimbriata*. In those waters, such as the coasts of Denmark and Sweden, where only one species occurs, authors have called it *D. concharum*, and indeed it is the species so named by Örsted. Unfortunately, this is the same species ('form B' of Caullery & Mesnil) as that named *D. caulleryi* by Dehorne and later synonymized with *D. fimbriata*. All authors who have distinguished between the two species have followed Dehorne's incorrect application of the name *D. concharum* to the parthenogenetic 'form A'. Thus the purpose of our application was to conserve the general usage of those authors who had correctly discriminated between the two species, but who had not realised that the true *D. concharum* Örsted was in fact synonymous with *D. caulleryi* (i.e. *D. fimbriata*) and that no satisfactory name was available for *D. concharum* sensu Dehorne. Although Dehorne believed Örsted's description to be 'suffisant à identifier l'animal', he incorrectly restricted the name *D. concharum* to 'form A' and gave the new name *D. caulleryi* to 'form B'. His interpretation of *D. concharum* has, until now, been followed by all authors who have distinguished between the two. To designate a neotype for *D. concharum* in the sense of Örsted's original material from the Öresund and Kattegat would not, therefore, solve the above problem. It is precisely for this reason that our proposed selection of neotype locality represents 'a deliberate misuse of Örsted's name'. Cullercoats is about the nearest locality to Denmark from which the segregate '*D. concharum*' of later authors has been recorded. Dehorne's type locality (Le Portel, Boulogne) for *D. caulleryi* is about the same distance from Denmark, but only this species ('form B') occurs there.

Pleijel & Mackie refer to the survey of marine macrobenthos from the Swedish west coast by Jägerskiöld (1971). One of us (P.H.G.) has examined all the *Dodecaceria* material from this survey, and can confirm that only one species ('form B') is present:

the *D. concharum* of Örsted = *D. fimbriata/caulleryi*. The other references cited by Pleijel & Mackie are simply those referred to by Jägerskiöld. Of these, Tauber (1879) and Levinsen (1884) are too early to recognize more than one species, so their usage of the name *D. concharum* is not significant here. Eliason (1962a) cites the old records from the Öresund but has 'keine neuen Funde', so his usage is inconclusive; in his paper on the polychaetes of the Skagerak expedition in 1933 (Eliason, 1962b) he has no records for *Dodecaceria*. The reference to Thorson (1946), however, is interesting and requires comment.

Thorson (1946, p. 106) gave an outline of the morphological and reproductive differences between the different 'forms' all referred to *D. concharum*, but gave literature references only to two brief papers published by Mesnil & Caullery in 1898, rather than to the more extensive work by Caullery & Mesnil (1898), and to Dehorne's preliminary papers of 1924 and 1927, rather than to his 1933 paper in which he established *D. caulleryi* as a new taxon. Thorson himself saw only one adult specimen from off Hellebæk which 'showed all the characteristics of form A, but seemed not to be in the season of reproduction' (it was taken on 26 July 1941). If this specimen is still extant, and if it is indeed 'form A', it would be an ideal candidate for a neotype for *D. concharum* Örsted, as not only was it obtained from one of the localities from which Örsted obtained his original material, but it would be in accordance with the general usage of that name by those authors who have accepted 'form A' and 'form B' as distinct species. It seems more likely, however, that Thorson misidentified his specimen. He states that form B1 (the atoke of *D. fimbriata*) resembles form A but is of a yellow colour. This is not, in fact, a diagnostic character as the yellow colour seen in this species is due to an accumulation of coelomocytes in the regenerating posterior segments of the animal. The older anterior segments which remain after asexual reproduction acquire black pigmentation just as in 'form A'. This black pigmentation and the absence of yellow probably led Thorson to assume his single specimen was 'form A'. If so, it would be the only Danish record and, given the low tolerance of that species to reduced salinity, as noted previously, that seems very doubtful.

Two more recent works which might have been expected to distinguish between the two species are Friedrich (1938, p. 141) and Hartmann-Schröder (1971, pp. 361–363). Friedrich included the North Sea in the distribution, but mentioned only one named species, *D. concharum*, although chaetae of both were illustrated (copied from Fauvel, 1926, p. 102, who in turn copied them from Caullery & Mesnil) with no comment on their taxonomic significance. Hartmann-Schröder indicated a distribution for *D. concharum* ranging from the Öresund to the North Sea, the Channel and the Mediterranean, as well as the North Pacific. She stated that its reproduction is only partly known, and sought to explain the two species as alternative reproductive strategies ('ein komplizierter Generationswechsel') of the same species and, like Thorson, seems only to have known the preliminary papers of Mesnil & Caullery and Dehorne. Hartmann-Schröder's confusion of the two species under one name has already been noted by Garwood (1982).

Pleijel & Mackie suggest that if *D. concharum* is to be interpreted, contrary to the application, as a senior synonym of *D. fimbriata*, then *Terebella ostreae* may constitute a suitable choice for 'the full salinity species'. We have already indicated (para. 2 of our application), however, that Dalyell's species was more probably

D. fimbriata and (para. 13) that George & Petersen (1991) also concurred in that synonymy. Pleijel & Mackie are of the opinion that 'a correct historical interpretation will be less likely to cause confusion for future workers'. That is for the Commission to decide. If that is agreed, we believe that all available names for the sexually reproducing species must fall either as junior synonyms of *D. concharum* Örsted or as nomina dubia, and a new name for 'form A' will have to be proposed. On the other hand, we believe that, as two names are in general use for the segregates and the application of those names to the segregates has been consistent, the best solution to this problem is to fix the name *D. concharum* to 'form A' by means of the proposed neotype.

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Comment on the proposed conservation of the specific name of *Xerophila geyeri* Soós, 1926 (Mollusca, Gastropoda)
(Case 2870; see BZN **51**: 105–107, 336–338; **52**: 176–178)

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Gittenberger (BZN **51**: 105–107) has asked the Commission to use its plenary powers to conserve the specific name of *Trochoidea geyeri* (Soós, 1926) by suppressing five specific names which he considers to be senior subjective synonyms and which are hence threatening the name. This proposal was objected to by Bouchet (BZN **51**: 336–338), who suggested that the principle of priority and, with respect to the two simultaneously-published oldest names, the principle of the first reviser, should be applied. He referred to the yet unstabilized taxonomy and nomenclature of the Alpine and Mediterranean HYGROMIIDAE and especially of the forms grouped in '*Trochoidea*' s.l.

Our intention is not to recommend any one decision. Whatever the Commission may decide, we should like to point out that the action proposed by Gittenberger is not sufficient. There are also several facts which, from our point of view, make the suggested action questionable.

1. The name *geyeri* has a further senior subjective synonym, *minor* Geyer, 1917 (p. 65, pl. 2, figs. 58–60), which was published in the combination *Xerophila striata* f. *minor*.

The (1926) paper by Soós does not make it clear whether he intended to introduce a replacement name or to describe a new species. Grounds for a possible interpretation of *geyeri* as a replacement name can be found in the discussion (Soós, 1926, pp. 97 97) of the identity and availability of *Xerophila striata* f. *minor* Geyer and Soós's statement that Geyer's 'Rasse' had to be renamed ('... mit einem neuen Namen zu bezeichen'). The name *minor* had been published as *Helix* (*Helicella*) *ericetorum* Müller forma *minor* by Westerlund (1889, p. 338), and used in the combination '*Xerophila ericetorum* Hartm. forma *minor* West.' by Lindholm (1907, p. 84), although not made available by either Westerlund or Lindholm. Up to now the publication by Soós (1926) has rightly been considered to contain an original description of a species and the name *minor* Geyer, 1917 has not been replaced as a junior homonym.

In his application Gittenberger refers to his (1993) revision of *Trochoidea geyeri* and similar taxa. This contains (pp. 304–305) a synonymy list in which he places, in addition to the five names proposed for suppression, *Xerophila striata* f. *minor* Geyer, 1917. Gittenberger sees no need to suppress this name as he considers it to be a junior homonym of both *Xerophila pyramidata* var. *minor* Monterosato, 1892 (p. 19) and *X. mexensis* var. *minor* Pallary, 1909 (p. 29). However, no homonymy exists in either of these cases. Inspection of the publications shows that Monterosato's and Pallary's names are not available. In Richardson's (1980) reference work there is no mention of a 'var. *minor*' in the genus *Xerophila* before that of Geyer (1917). It therefore seems highly probable that *Xerophila striata* f. *minor* Geyer is not preoccupied by a senior primary or secondary homonym and must be added to the names proposed for suppression as a further senior synonym of the name *X. geyeri* Soós, 1926.

2. In our view there is still some uncertainty whether the five names listed by Gittenberger (1993 and his application) should be placed in the synonymy of *Trochoidea geyeri*. When dealing with a group of species exhibiting large intraspecific conchological variation, and where overlapping with conchologically similar species (of which some belong in other genera) exists, the proposed suppression of these names, which is based only on the one or two shells preserved as syntypes (or topotypes) in the Bourguignat collection (see Gittenberger, 1993, pp. 303–307), seems hazardous. We think it is desirable to confirm the conspecificity of these taxa with *T. geyeri* by anatomical studies on topotypical material. Gittenberger himself (1993, p. 306) remarked: 'Whenever the identification of *T. geyeri* can be verified anatomically, that opportunity should be used'.

3. The statement made by Gittenberger (para. 3 of his application) on Bourguignat's 'Nouvelle École' bears no relevance to the case. The disciples of the 'Nouvelle École' used a species concept very different from that accepted today and did, indeed, introduce an enormous number of often ill-conceived new species. From the nomenclatural point of view, however, the specific names are available and must be treated equally with all other available names, as no action has ever been taken to reject the works of Bourguignat and his co-workers. In this respect we support the views of Bouchet in his comments on this case (BZN **51**: 336–337, paras. 3 and 5). We are also opposed to the general trend of neglecting revisory systematic studies in favour of more modern techniques. In particular a much-needed re-evaluation, which is far from complete, of names introduced by 19th-century authors requires a

thorough and careful revision of original descriptions and type collections. The dramatic environmental changes in the last decades render these old collections precious documents of a biodiversity that might not otherwise be revealed. The 'digging in the graveyard of synonymy' is not a theoretical, time-wasting hobby, but may lead to the recognition of fragmented populations or vanishing species and genetically differentiated forms, and this may have an influence on modern conservation strategies.

Acknowledgement
We wish to thank Bernhard Hausdorf (Hamburg) for stimulating discussions, particularly on the status of the name *Xerophila striata* f. *minor* Geyer, 1917.

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Comments on the proposed conservation of the specific names of *Octopus vulgaris* Cuvier, [1797] and *Loligo vulgaris* Lamarck, 1798 (Mollusca, Gastropoda)

(Case 2922; see BZN **52**: 24–26)

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I support the application by Drs Guerra and Alonso-Zarazaga. The names *Octopus vulgaris* Cuvier, [1797] and *Loligo vulgaris* Lamarck, 1798 are familiar in the zoological literature, not only in systematic descriptions and faunal lists but because both animals have been used for experimental purposes, always referred to by these names. It would be most confusing if the names were superseded by other names which are claimed to have priority.

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Drs Guerra and Alonso-Zarazaga are correct in their belief that use of the names *Octopus octopodia* (Linnaeus, 1758) and *Loligo loligo* (Linnaeus, 1758) would cause

unnecessary confusion. Although both names formally have priority over the names that currently are used universally for the respective species *O. vulgaris* Cuvier, [1797] and *L. vulgaris* Lamarck, 1798, neither of the Linnaean specific names has been used anywhere that we are aware of in recent literature.

As Guerra & Alonso-Zarazaga noted (para. 5 of their application), the Commission rejected Schneider (1784) as the author of the name *Loligo* in Opinion 233. We have recently completed a review of loliginid nomenclature (Sweeney & Vecchione, in press) which led us unexpectedly to the revelation that the name became available 28 years prior to Lamarck (1798). In ruling on this case the Commission should attribute the authorship of the generic name *Loligo* to Huddesford (1770).

Names published by Lister (1685 1692) are obviously not available. However, a post-Linnaean edition ('Editio altera. Recensuit et indicus auxit Gulielmus Huddesford') was published in 1770. This reproduces Lister's plates and identifies the illustrated species by their Linnaean names in a fully binominal ('methodum celeberrimi Caroli a Linné') index (Index Alphabeticus). A second index (Index Tabularum Anatomicarum), also by Huddesford, refers to the 22 anatomical plates and also uses binominal nomenclature. In this, *Loligo* (p. 11) refers to four plates (pls. 9, 10, 11 and 22) of external and internal anatomy of a squid (pl. 9 was labelled by Lister 'Loligo a Sleeve' (i.e. '*Loligo* commonly named 'sleeve' '; personal communication F.M. Bayer, Smithsonian Institution). This reference fulfils the requirements under Article 12b(7) of the Code for an indication and renders the name available from Huddesford's second index.

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I support very strongly indeed the application by Guerra & Alonso-Zarazaga to conserve the names *Octopus vulgaris* Cuvier, [1797] and *Loligo vulgaris* Lamarck, 1798.

These are not only economically important species; they are much studied animals whose names, in this form, are entrenched in the scientific literature, specifically in the areas of sensory physiology and neurophysiology, experimental psychology, ethology and animal behaviour. For example, my colleague, R.T. Hanlon, and I are about to publish a book, *Cephalopod behaviour*, 219 pp., Cambridge University Press, that includes these generic and specific names on almost every page.

It would be extremely confusing for us all if these names were superseded merely for the sake of priority.

Comment on the proposal to remove the homonymy between BRACHYPTERINAE Erichson, [1845] (Insecta, Coleoptera) and BRACHYPTERINAE Zwick, 1973 (Insecta, Plecoptera), and proposed precedence of KATERETIDAE Ganglbauer, 1899 over BRACHYPTERINAE Erichson, [1845]
(Case 2865; see BZN **51**: 309–311; **52**: 179–181)

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A comment by Dr Audisio (BZN **52**: 179–181; June 1995) corrected mistakes in his original application and added a new proposal to give precedence to the family-group name KATERETIDAE (or -INAE) Ganglbauer, 1899 over the prior name BRACHYPTERIDAE (or -INAE) Erichson, [1845], noting (para. 3) that the latter name 'has not been used at all for more than 50 years'. This is not correct; the name BRACHYPTERINAE has continued to be used occasionally for this group (see, for example, Hatch, 1961, p. 127), although the name CATERETINAE or KATERETINAE has been used much more commonly during this period. Further, recent clarification of the relative ages of these names had led to the adoption of the name BRACHYPTERIDAE (or -INAE) for this group in two reviews of beetle classification and family-group names (Pakaluk, Ślipiński & Lawrence, 1994, p. 235; Lawrence & Newton, 1995, p. 873) and one other general work (Lawrence & Britton, 1994, p. 123).

The end of the last sentence of my previous comment as published (BZN **52**: 181; '... action to conserve Ganglbauer's (1899) KATERETIDAE [is] a necessity') was the result of a misunderstanding of my intentions by the Commission Secretariat. In fact, the conservation of KATERETIDAE seems unnecessary to me, and was not proposed in the nomenclatural reviews cited above. The name BRACHYPTERIDAE has clear priority, is fairly well known (as a valid name or synonym of CATERETIDAE) and, according to the original proposal of the applicants, will continue in use as a subfamily name within the 'KATERETIDAE'. The argument of the applicants for the conservation of the name KATERETIDAE is weakened by the fact that the name was universally spelled CATERETIDAE before being emended to KATERETIDAE by Nunberg (1976) based on the original spelling of the type genus *Kateretes* Herbst, 1793 (emended to *Cateretes* by Illiger, 1798). Thus, the most commonly used name for this group over the past century, CATERETIDAE (or -INAE), will be changed by adoption of either the emended name KATERETIDAE, as the applicants propose, or the prior name BRACHYPTERIDAE, as others have already done. It seems inconsistent for the applicants to strictly follow the Code for the spelling of the type genus and resultant family name and at the same time set aside priority to conserve the emended family name over a prior one. Other common Herbst generic names spelled originally with a 'K' instead of a subsequently adopted 'C' have had the emended spellings conserved recently (Opinion 1810; BZN **52**: 211–213, June 1995) and perhaps *Kateretes* should be treated in the same way.

I recommend that the applicants either modify their proposal further to conserve the generic spelling *Cateretes* as well as CATERETIDAE, or (better) drop this whole aspect of their proposal and go back to the original proposal dealing only with the homonymous names BRACHYPTERINAE in Coleoptera and Plecoptera (and follow priority and original spellings in dealing with KATERETIDAE and *Kateretes*).

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Comment on the proposed conservation of *Sphaerocera* Latreille, 1804 and *Borophaga* Enderlein, 1924 (Insecta, Diptera)

(Case 2907; see BZN **51**: 312–315; **52**: 181–183)

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In response to Brown (BZN **52**: 182–183) I would point out that the possibility that *Borophaga okellyi* Schmitz, 1937 might be a synonym of *Musca subsultans* Linnaeus, 1767 was first suggested by Schmitz (1951). The fact that Beyer (in Schmitz [then deceased] & Beyer, 1965) ignored this is consistent with the opinion of his contemporaries (e.g. Borgmeier, 1967) that he was cavalier in his treatment of matters of detail. Unfortunately, initially Borgmeier (1963) also overlooked Schmitz's comments, but he subsequently remedied this (Borgmeier, 1968). In order to resolve the issue I critically evaluated the specimen in the Linnean Society collection in 1981, and confirmed the suspected synonymy (Disney, 1982). I then included this synonymy in the revised checklist of British species of PHORIDAE (Disney, 1983). Perhaps, instead, I should have requested the Commission to conserve the name *B. okellyi*. However, at that time the record of the Commission was that it was most reluctant to overrule the principle of priority, except in the most extreme cases. Likewise, 15 years ago the exhumation of long forgotten homonyms, and the consequent displacement of long familiar names, in pursuit of a rigid application of the principle of priority, was rampant. An example is the absurd case of *Phora aterrima* (Fabricius, 1794) and its replacement name *P. atra* (Meigen, 1804) (in Crosskey, 1980), which I have commented on elsewhere (Disney, 1994).

It would seem somewhat perverse to suggest now, 13 years after my note of 1982, that we should override the principle of priority in the interests of conserving the

nomenclature employed in two 1960's publications that are both now in need of much revision. While both works are still useful, much of their nomenclature has been subsequently amended. Despite the fact that the two more recent key works I have referred to previously are by myself, they are generally regarded as being more relevant references to the currently accepted nomenclature in the PHORIDAE. Furthermore, I have since used the name *B. subsultans* in my book (Disney, 1994), which is now found in libraries across the world. While I sympathise with Brown's disquiet at the displacement of familiar names, to now suggest the resurrection of a synonym replaced 13 years ago, purely on the grounds he proposes, would seem to owe more to parochialism than to more defensible considerations. It would certainly set a most unfortunate precedent. If the Commission were to accept the suppression of the name *subsultans*, as proposed in the application by Brown & Sabrosky, it would merely create confusion, especially as my proposal in 1982 was made in accordance with the Commission's record at that time. I therefore expect the Commission to stand by the nomenclatural consequences of my proposed synonymy of 1982. If it rules otherwise, one would be forced to conclude that the Commission no longer believes in its own principles; it would therefore be entirely proper to ignore any such ruling.

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Comment on the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata)

(Case 2869; see BZN **50**: 129–132; **51**: 153–156, 264–265, 341–342)

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It may seem strange that so many people have commented on the proposed conservation of the rather obscure name HEMIDACTYLIINI, which at the time of the application had been used less than 20 times since the taxon was recognized less than 30 years previously. I think this can be explained. It is the aim of some zoologists to completely abandon the principle of priority and to free systematics from 'the tyranny of the past' (Savage, 1990a, b), and they see this as a test-case. The response

of the current Commission will enable the international community of zoologists to see what sort of leadership it is giving on the issue of priority versus so-called 'current usage'.

I wish to respond to a few of the points which have been raised by this case. First, MYCETOGLOSSINI Bonaparte, 1850 and HEMIDACTYLIINI Hallowell, 1856 are not objective synonyms, and additional family-group names may be needed in the future since the phylogeny of this salamander group is not yet well known. Thus neither name should be suppressed. Secondly, Smith & Wake take into account papers using HEMIDACTYLIINI which were not published until after I (Dubois, 1984) had shown this name to be invalid. If they had waited another ten years no doubt they could have invoked still more. This case shows how clearly 'current usage' can be deliberately rigged or manipulated, unlike priority. Smith & Wake suggest that when I rediscovered Bonaparte's name Mycetoglossina I should have proposed that the Commission reject this name as being 'forgotten'. Of course I could have done this, as I have in many other cases, if I had considered that 'stability was disturbed' or confusion caused (cf. Article 23b of the Code), but I maintain that 'stability' cannot be called upon to protect a name used by only nine authors in ten publications over a period of 18 years (1966–1984). It was therefore on purpose that I did not ask for rejection of Mycetoglossina. To call such actions 'mindless adherence to priority' (Smith & Wake, BZN **51**: 341–342, para. 5) is an insult to the thousands of authors who have followed the principle of priority in replacing junior synonyms by senior ones, and thanks to whom stability has been reached for the very large majority of names.

I would like to contrast the present case with another amphibian example. Duellman & Wiens (1992) discovered that *Scinax* Wagler, 1830 was a senior subjective synonym of *Ololygon* Fitzinger, 1843, which since 1977 had been used in dozens (if not hundreds) of papers on hylid frogs. Probably by 'mindless adherence to priority' they replaced *Ololygon* by *Scinax*, and in Duellman's (1993) list this name is used for 76 species of which 11 had been originally described in *Ololygon*. I fully support the action by Duellman & Wiens. So far nobody has asked for the conservation of *Ololygon* by the suppression of *Scinax*, and it is interesting to speculate why in some cases a replacement of name is acceptable while in others it is not. Has this something to do with the 'importance' or influence of the author of the 'resurrection', or their country or continent of residence, or the distribution of the animals concerned (obscure tropical ones vs. Northern ones)? The only 'democratic' rule is that of priority, which when fully observed ensures final stability in the names of animals while respecting the equality of all scientists.

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Comments on the proposed conservation of *Hydromantes* Gistel, 1848 (Amphibia, Caudata) by the designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species
(Case 2868; see BZN **50**: 219–223; **51**: 149–153; **52**: 183–186, 267–269)

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As a student of European plethodontid ecology and conservation I wish to comment on Smith & Wake's application (BZN **50**: 219–223) to conserve the name *Hydromantes* Gistel, 1848. As already pointed out by Dubois (BZN **52**: 183–186), Smith & Wake's statement (BZN **50**: 221, para. 7) that 'Subsequent authors have not adopted Dubois's (1984) nomenclature' is incorrect. This assertion is based on the complete disregard of European literature. Indeed, since Lanza (1986) raised to generic level the subgenus *Speleomantes* Dubois, 1984, the name *Speleomantes* has been used by a large number of European zoologists in many scientific papers, books and field guides in English, German, Italian and Spanish. A rapid, and therefore incomplete, review of the scientific literature reveals that *Speleomantes* has been used in 11 works (six of which were edited before Smith & Wake's application), in addition to those reported by Dubois (BZN **52**: 184). These works include a publication on conservation biology published on behalf of the Conservation Committee of the Societas Europea Herpetologica (Corbett, 1989), two Red Lists of endangered species (Pavan, 1992; Groombridge, 1993), the checklist of Italian vertebrates edited under the auspices of the Scientific Committee for the Fauna d'Italia (Amori et al., 1993), a museum catalogue (Gavetti & Andreone, 1993), three Italian regional atlases (Ferri, 1990; Mazzotti & Stagni, 1993; Doria & Salvidio, 1994), a handbook on speleology (Zoia, 1987), and two herpetological field guides (Puddu, Viarengo & Erminio, 1988; Geniez & Grillet, 1990). Moreover, I counted 24 papers between 1987 and 1995 (18 of which were published before Smith & Wake's application) by 27 different authors citing the name *Speleomantes* (the full list of these papers is held by the Commission Secretariat).

Last, but not least, the name *Speleomantes*, and not *Hydromantes*, was used by the Council of Europe in the international legislation on the conservation of habitats and species (Directive 92/43 of 21 May 1992, Annex II), and also in a regional act protecting reptiles and amphibians (L.R. 4/92 of Liguria, NW Italian administrative region).

There is sufficient evidence to demonstrate that in the European scientific community the name *Speleomantes* is successfully replacing *Hydromantes*. Therefore, conserving the name *Hydromantes* in the manner proposed by Smith & Wake in their application will maintain stability on the North American side of the Atlantic, but will cause confusion and instability on the European side.

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I have read the comment by Smith, Wake & Jennings (BZN **52**: 267–269) and now appreciate from these colleagues that the proposed conservation of the name *Hydromantes* Gistel, 1848 is not meant to infringe upon the taxonomic freedom of zoologists and to discourage the recognition by some authors of distinct genera (or subgenera) for the European and American species of this group of salamanders. However, despite these reassurances, I am not sure that the proposed nomenclatural action would not be without taxonomic consequences. There have been occasions when actions by the Commission have had a strong impact on the taxonomy of a group (the amphibian generic name *Cornufer* is an example; see Dubois, 1981, p. 247).

I understand Smith, Wake & Jennings's argument for the conservation of the name *Hydromantes*, based on the large usage of the name in many non-taxonomic publications and during a period of 61 years (1923 1984), before this usage was shown to be incorrect. Even if this reasoning is accepted, I have shown (BZN **52**: 184) that it is possible to recognize a clear trend among European herpetologists to replace the invalid name *Hydromantes* with the valid *Speleomantes* Dubois, 1984 and, in the absence of Smith & Wake's application, this replacement would probably have been virtually complete by the end of the century. It is clear that the major concern for the conservation of the name *Hydromantes* is among North American, not European, herpetologists. This is demonstrated in a number of ways.

Among the 19 supporting comments, 14 were from North American herpetologists, only three were from European authors, and two were from other parts of the world. On the other hand, as noted by Smith, Wake & Jennings themselves (BZN **52**: 268, para. 4), in the period 1986 1994 most publications concerning these salamanders (and not least all those reported by the *Zoological Record*) were dealing with the

European species of the group. There exists therefore a large discrepancy between the biological interest shown for the animals by European zoologists and the desire of these zoologists to protect the name *Hydromantes*.

I have already provided (BZN **52**: 184) a list of 14 references to publications using the name *Speleomantes* for the European species of this group, including four major books. I can now add a further 30 additional references, the full list of which is held by the Commission Secretariat (1986: 1; 1987: 1; 1989: 3; 1990: 5; 1991: 3; 1992: 5; 1993: 7; 1994: 2: 1995: 3). This list does not show that the name *Speleomantes* has been 'more used' than *Hydromantes*, which is of course not the case, but it does underline the fact that Smith & Wake's statement (para. 7 of their application) that 'Subsequent authors have not adopted Dubois's (1984) nomenclature' is completely misleading. The fact is that in recent years two parallel nomenclatures have been used for these animals, one mostly by North American biologists (*Hydromantes* for both American and European species) and the other mostly by European researchers (*Hydromantoides* Lanza & Vanni, 1981 for North American species and *Speleomantes* for European species). It is not a question of counting the number of references for each scheme of nomenclature but of realizing that they have been developing in parallel for about ten years. One recent publication (the (1993) *1994 IUCN Red List of threatened animals*, compiled by the World Conservation Monitoring Centre and edited by B. Groombridge) is particularly enlightening. In this the name *Hydromantes* is used for the American species of the genus, and *Speleomantes* for the European. Needless to say, this scheme of nomenclature is neither the correct one under the Code nor that proposed by Smith & Wake but it demonstrates the current usage of these names.

I am therefore offering a new solution to this nomenclatural problem. It is clear that the conservation of *Hydromantes* (formally a replacement name for *Geotriton*) is possible only by Commission action. I suggest that, instead of designating the European species *Salamandra genei* Temminck & Schlegel, 1838 as the type of *Hydromantes*, as proposed by Smith & Wake in their application, the American species *Spelerpes platycephalus* Camp, 1916 be designated the type. As a consequence the name *Hydromantoides* would become a junior objective synonym of *Hydromantes* and could never again threaten the usage of the latter name. As for the name *Speleomantes*, being much more recent this could not threaten *Hydromantes* if both groups are kept in a single genus but it would remain available for the European species if authors wish to recognize a distinct genus or subgenus for the latter. This solution would avoid any pressure of nomenclature upon taxonomic decisions and it would respect the wish of American zoologists to continue using *Hydromantes* for these salamanders.

I also suggest that, to avoid any confusion in the future, the status of the name *Geotriton* Bonaparte, [1832] be clarified. As I have pointed out previously (BZN **52**: 185), this name would have been the most appropriate for the European group of salamanders but it has not been used since 1923. It is desirable to maintain *Speleomantes* and I therefore propose that *Geotriton* be suppressed.

I suggest that the following proposals replace those originally put forward by Smith & Wake (BZN **50**: 221).

The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the name *Geotriton* Bonaparte, [1832] for

the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Hydromantes* Gistel, 1848 and to designate *Spelerpes platycephalus* Camp, 1916 as the type species;

(3) to place on the Official List of Generic Names in Zoology the name *Hydromantes* Gistel, 1848 (gender: masculine), type species by designation in (2) above *Spelerpes platycephalus* Camp, 1916;

(4) to place on the Official List of Specific Names in Zoology the name *platycephalus* Camp, 1916, as published in the binomen *Spelerpes platycephalus* (specific name of the type species of *Hydromantes* Gistel, 1848);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:

(a) *Geotriton* Bonaparte, [1832], as suppressed in (1) above;

(b) *Hydromantoides* Lanza & Vanni, 1981 (a junior objective synonym of *Hydromantes* Gistel, 1848).

Additional reference

Dubois, A. 1981. Liste des genres et sous-genres nominaux de Ranoidea (Amphibiens Anoures) du monde, avec identification de leurs espèces-types: conséquences nomenclaturales. *Monitore Zoologico Italiano*, (n.s.) **15**: 225–284.

Comments on the proposed conservation of the family-group name PHRYNOBATRACHINAE Laurent, 1941 (Amphibia, Anura)

(Case 2362; see BZN **51**: 240–246; **52**: 269–271)

(1) Barry T. Clarke

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I fully support the proposal to give the name PHRYNOBATRACHINAE Laurent, 1941 precedence over HEMIMANTIDAE Hoffman, 1878, PETROPEDETINAE Noble, 1931 and CACOSTERNINAE Noble, 1931. Prof Dubois's case is well put; the two most important issues are:

1. If the criterion of established usage is followed, then the name PHRYNOBATRACHINAE should be adopted since it has been used more often than PETROPEDETINAE, as Dubois demonstrated in his application (BZN **51**: 241).

2. If priority is the criterion, then PETROPEDETINAE is not the oldest name for the subfamily; as Dubois noted (BZN **51**: 242), the earlier (though unused) name HEMIMANTIDAE Hoffmann, 1878 (as HEMIMANTINAE) is available.

Frost & Lynch (in Frost, 1985) were in error when they recorded that PETROPEDETINAE was the 'nomenclaturally correct' name for this family group. They were aware of the older HEMIMANTIDAE, since they mentioned the name. Their choice of PETROPEDETINAE fulfilled neither the criterion of established usage nor that of the oldest available name, and they had no good reason for preferring its adoption over PHRYNOBATRACHINAE or HEMIMANTIDAE.

In their comment Frost & Savage (BZN **52**: 270–271) have wrongly represented the current situation in three particulars:

(1) The work by Frost (1985) has been adopted as the official classification of amphibians for CITES enforcement purposes, but classification and nomenclature are dynamic subjects and many changes have occurred since 1985, necessitating the appearance of an updated version of *Amphibian species of the world* (Duellman, 1993). One may safely suppose that this 372-page document of additions and corrections to the 1985 work will also be adopted by CITES.

(2) In the new work, Duellman (1993, p. 232) extended the 1985 comment under PETROPEDETINAE to include the citation of two important works, Poynton & Broadley (1985) and Laurent (1986), which used PHRYNOBATRACHINAE as the family-group name, but there were none using PETROPEDETINAE. Duellman also recorded Dubois's (1992) use of the name PHRYNOBATRACHIDAE at family rank (see BZN **51**: 242). Thus, the statement by Frost & Savage (BZN **52**: 270) that PHRYNOBATRACHINAE and PETROPEDETINAE 'have about equal frequencies of usage' and consequently the conservation of the junior synonym PHRYNOBATRACHINAE 'does not contribute to stability' is not only incorrect, as Dubois demonstrated in his application (BZN **51**: 241), but is contrary to Duellman's (1993) updated comments.

(3) Frost & Savage (BZN **52**: 270) noted that 'the author of the name PHRYNOBATRACHINAE, R. Laurent, was one of the contributing reviewers to the PETROPEDETINAE section' of Frost (1985). If their intention is to imply Laurent's agreement for their preference for the name PETROPEDETINAE, this is negated by Laurent's (1986) usage of PHRYNOBATRACHINAE, cited by Duellman (1993).

As noted in para. 8 of the application, taxonomic need for family-group names is dependent upon the systematic relationships of the type species of *Phrynobatrachus* Günther, 1862, *P. natalensis* (A. Smith, 1849), with the type species of the genera upon which the other family-group names are based. The supraspecific systematics of the amphibians comprising the group in question are in turmoil. Schmidt & Inger (1959, p. 136) commented: 'Probably no genus of African Salientia, with the exception of *Hyperolius*, gives taxonomists as much difficulty as *Phrynobatrachus*'. The only detailed appraisal of the supraspecific-level systematics of *Phrynobatrachus* and its allied genera is that of Laurent (1940). Further systematic research on this group is urgently needed. The application of family-group names to this group of amphibians is premature until further work has been carried out. The possibility that *Hemimantis* may be needed as a generic name, and perhaps even as the basis of a family-group name, could be inferred from Perret (1988), who noted that *P. calcaratus* (Peters, 1863), the type species of *Hemimantis* by monotypy, and a further four species of West African *Phrynobatrachus* possessed a spine-like appendage on the upper eyelid ('un éperon suprapalpébral') not found in any of the other species of *Phrynobatrachus* listed by Frost (1985). Perret also noted: 'Il est intéressant de noter que ces 5 taxa possèdent aussi chacun des glandes fémorales mâles et présentent un pattern typique contrasté différentiel de face inférieure'.

I support the adoption of Dubois's proposal because it provides stability in the usage of the names concerned.

Additional references

Duellman, W.E. 1993. *Amphibian species of the world: additions and corrections*. iii, 372 pp. University of Kansas, Lawrence. University of Kansas Museum of Natural History Special Publication No. 21.

Perret, J.-L. 1988. Les espèces de *Phrynobatrachus* (Anura, Ranidae) à éperon palpébral. *Archives des Sciences* (Genève), **41**: 275–294.

Schmidt, K.P. & Inger, R.F. 1959. Amphibians exclusive of the genera *Afrixalus* and *Hyperolius*. *Exploration du Parc National de l'Upemba*, **56**: 1–264.

(2) Alain Dubois

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In their comment (BZN **52**: 270) Frost & Savage proposed the precedence of the name PETROPEDETINAE Noble, 1931 over PHRYNOBATRACHINAE Laurent, 1941 for the same taxon, partly on the grounds of priority but mostly on the grounds that the former had been adopted 'in the comprehensive checklist of the amphibians of the world (Frost, 1985)'. In my view this latter argument is completely unacceptable. If it were to be accepted by the Commission in this case one might fear that it would be used again and again in other similar circumstances in the future, which could have consequences in zoological nomenclature as a whole.

In the introduction to his work Frost (1985, p. 1) wrote: 'This checklist is an attempt to report the state of the literature of amphibian systematics and is in no way intended to standardize or institutionalize amphibian taxonomy'. In a detailed commentary (Dubois, 1987) on this book I wrote (pp. 143–144): '... this checklist has been prepared and published much too quickly and it does not fit the requirements which it should fit to be fairly useful to the international batrachological community. What may be feared now is that, despite its statement to the contrary ..., this checklist might tend to 'standarize or institutionalize amphibian taxonomy'. If the numerous mistakes which appear in the book are uncritically repeated by many authors they will become more difficult to rectify. My hope in working on this detailed review has been to limit at least partially this negative impact by providing corrections to some of the mistakes of the book. Other mistakes certainly remain. It will be necessary to take advantage of these and other comments to correct the list and prepare an improved second edition of this book. The sooner this revised edition appears, the better, since it will limit the spread of some mistakes in batrachological publications'. Frost & Savage's comment shows that the fear I expressed was warranted; less than ten years after the publication of this book its editor and one of its contributors think that it should be the standard for amphibian classification and nomenclature. Many of my corrections have been incorporated in a recent update of the checklist (Duellman, 1993). Frost's (1985) work cannot be considered the last word on the nomenclature of amphibians and should not be appealed to as the standard for the usage of names.

Frost (1985, pp. 1–2) stated that in his checklist 'except for suprageneric taxonomy and a very few exceptional cases, a rule of following the most recent revisions has been arbitrarily applied'. No rationale was given for not following this rule for suprageneric taxa. In this present case Frost could have adopted either of two possible alternative courses: (a) to follow the most recent revisions (Dubois, 1981, 1984) in which the name PHRYNOBATRACHINAE was used for the taxon, or (b) to strictly apply the rule of priority, in which case the name HEMIMANTIDAE should have been used. Frost did not follow either of these but chose a third course.

A recurrent mistake in Frost's (1985) checklist, endorsed by Savage (1986), is to believe that family-group names based on generic names which are currently treated as junior synonyms are not valid. This mistake led Frost & Lynch (in Frost, 1985, p. 439) to consider PETROPEDETINAE the valid name for the taxon. They deliberately ignored the most senior synonym, HEMIMANTIDAE.

In their remaining argument for the use of the name PETROPEDETINAE, Frost & Savage (BZN **52**: 270) stated that the author of the name PHRYNOBATRACHINAE, R. Laurent, 'was one of the contributing reviewers to the PETROPEDETINAE section'. However, an examination of the references cited in my application for the uses by Laurent of the names PHRYNOBATRACHINAE and PETROPEDETINAE demonstrates that this author 'changed his mind several times' (para. 5) and showed 'inconsistency in the usage of the name for this subfamily' (para. 6). This points to Laurent's lack of interest in nomenclatural matters and it is therefore pointless to call upon his implied agreement in support of a preferred family-group name.

Additional references

Dubois, A. 1987. *Living amphibians of the world*: a first step towards a comprehensive checklist. *Alytes*, **5**: 99–149.

Savage, J.M. 1986. Review of Dubois (1984). *Copeia*, **1986**: 259–262.

Comments on the proposed conservation of the specific name of *Phyllophis carinata* Günther, 1864 (Reptilia, Serpentes)

(Case 2850; see BZN **52**: 166–169)

(1) James R. Dixon

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I have read the application to conserve the specific name of *Phyllophis carinata*, which has had stability in the literature for some 65 years.

I believe, as most biologists do, that stability in the use of a scientific name in the literature is paramount if the usage of a name has shown stability for more than 50 years. It would render considerable confusion to change a well established name for one in disuse.

I therefore support the application by Smith, Ota & Wallach to reject the specific name of *Coluber phyllophis* Boulenger, 1891 and to accept Günther's (1864) name *carinata* as being valid.

(2) Tsutomu Hikida

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I write in support of the application by Smith, Ota & Wallach to conserve the specific name of *Phyllophis carinata* Günther, 1864. The combination *Elaphe carinata* (Günther, 1864) has been used for the species in all revisional works in East Asian

regions since 1907, and in all works on the species since 1929, including the descriptions of three subspecies.

I strongly recommend approval of the proposals to prevent the unnecessary confusion that would result from the resurrection of the long unused specific name of *Coluber phyllophis* Boulenger, 1891.

Comments on the proposed conservation of *Aptornis* Owen, [1848] (Aves)
(Case 2879; see BZN **52**: 170–174)

(1) B.J. Gill
Auckland Institute & Museum, Private Bag 92018, Auckland, New Zealand

On behalf of the Checklist Committee of the Ornithological Society of New Zealand I wish to support the proposal of Drs Weber and Krell to conserve the name *Aptornis* for the large rail-like extinct New Zealand birds commonly known as adzebills. This action will promote the stability of New Zealand bird names, given that *Apterornis* was not used for these birds between 1849 and 1984.

We can confirm Weber & Krell's contention that the vast majority of authors have used the spelling *Aptornis*, and to the examples they cited for the usage of the name (para. 4) we can add Oliver (1930, p. 352) and the following selection of more modern works: Scarlett (1972, p. 12), Martin & Klein (1984, p. 743), Cox (1991, p. 33), Gill & Martinson (1991, p. 63), Worthy & Holdaway (1994, p. 339). The last three publications persisted in using *Aptornis* after the priority of *Apterornis* had been noted in 1985.

We therefore ask the Commission to rule in favour of all four proposals in para. 8 of the application.

Additional references

Cox, G.J. 1991. *Prehistoric animals of New Zealand.* Collins, Auckland.

Gill, B. & Martinson, P. 1991. *New Zealand's extinct birds.* Random Century, Auckland.

Martin, P. & Klein, R. (Eds.). 1984. *Quaternary extinctions.* University of Arizona Press, Arizona.

Oliver, W.R.B. 1930. *New Zealand birds.* Fine Arts, Wellington.

Scarlett, R.J. 1972. Bones for the New Zealand archaeologist. *Canterbury Museum Bulletin*, **4**: 1–33.

Worthy, T.H. & Holdaway, R.N. 1994. Quaternary fossil faunas from caves in Takaka Valley and on Takaka Hill, northwest Nelson, South Island, New Zealand. *Journal of the Royal Society of New Zealand*, **24**: 297–391.

(2) Walter J. Bock
Department of Biological Sciences, Columbia University, New York, NY 10027, U.S.A.

I strongly support the application and proposals made by Weber & Krell on the basis that Owen was not responsible for the publication of the name *Apterornis* and that this name was forgotten for 140 years before it was used again. It is time that names published in reports of lectures presented at scientific meetings which appeared prior to names appearing in the published papers are no longer used to upset well-established usage, as in this case.

The family-group name APTORNITHIDAE Bonaparte, 1856 is the valid name for the family-level taxon containing the genus *Aptornis*. I propose that this name should also be placed on the Official List.

Comment on the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale*
(Case 2928; see BZN **51**: 135–146, 266–267, 342–348; **52**: 78–93, 187–192, 271–275)

Anthea Gentry
c/o The Secretariat, The International Commission on Zoological Nomenclature, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.

I read with great interest the comment (BZN **52**: 273–275) by Prof Claude Dupuis, who has amplified from his own researches details of Brisson's career and works. I welcome his support for my application, at least as far as the conservation of 11 of Brisson's new generic names is concerned.

Brisson's (1762) publication is described on the title page as 'Editio altera auctior', but there is no mention of an editor and, notwithstanding Prof Dupuis has mentioned a couple of textual alterations, little evidence of editing following the first (1756) publication. A note (Bibliopola lectori) by the publisher, Theodore Haak, to the reader records that he has omitted the French text of the first edition and reprinted only the Latin as a convenience to students, so that this work may be more easily carried. He notes that the taxonomic arrangement of a 'Vir. Cel.' (celebrated man) who teaches in the Leiden Academy (and who Prof Dupuis has identified as J.N.S. Allamand) has been followed for the quadrupeds. This presumably refers to the placement of 'Le Lamantin/ Manatus' in *Phoca* rather than in *Odobenus*, mentioned by Prof Dupuis, since there appear to be no other differences from Brisson's original (1756) work. Haak also records (in translation): 'In this, my edition, are given descriptions of some animals which the author [Brisson] has not mentioned; but lest these additions, if unsatisfactory, be attributed to him, they are placed between these brackets, [ ]. Also, a † signifies that there is material in our museum'. The additions amount to some 14 new taxonomic species but no new generic names. Dupuis has noted that some of the additions derive from Gmelin (1758, 1760). Others derive from Aldrovandi (1645), Flacourt (1661), Steller (1751), Juan & Ulloa (1752) and Daubenton (1762). Allamand's name does not appear on the title page of the (1762) publication nor, to my knowledge, elsewhere in the work. For this reason, and those given above, I believe that to cite the (1762) publication as 'Brisson édit Allamand' would be inappropriate.

I share Prof Dupuis's reluctance to reject old and classic works. It was because of the confusion surrounding the status of Brisson's (1760) *Ornithologia*, necessitating three separate rulings over more than 50 years, and my desire to avoid a recurrence in this case, that I proposed that the (1762) work on mammals be rejected at the same time as conserving the names in current usage. Placing the *Regnum Animale* on the Official Index, as a work which did not use binominal names for species, would be in accord with Article 11c of the Code, whereas placing it on the Official List, as Prof Dupuis has suggested, would not be. Comments on this case have demonstrated that the work has de facto been rejected by some authors and my proposal has been endorsed by others.

The ruling on Brisson's (1760) *Ornithologia* was eventually (Direction 105, October 1963) restricted to the generic names listed in his *Tabula Synoptica Avium*. In the case of Brisson (1762), the status of each of the mammal generic names used in the work is so well known, and has been known for so long, that approval by the Commission of the rejection proposal will result in no unforeseen consequences. Of the 46 names included in the *Regnum Animale* and set out in Brisson's *Tabula Synoptica Quadrupedum* (pp. 12, 13) and *Tabula Synoptica Cetaceorum* (p. 218), 25 were published by Linnaeus and are included in the latter's 10th edition (1758) of *Systema Naturae*; nine were new names which have long been recognised as junior synonyms of names published by Linnaeus (1758) (see, for example, Merriam, 1895); and 12 were new names which are currently in use. One of the new names (*Odobenus*) has already been conserved and the application seeks to conserve the remaining 11 names.

Names included in both the *Systema Naturae* (Linnaeus, 1758) and *Regnum Animale* (Brisson, 1762) are the following:

Balaena	*Equus*	*Myrmecophaga*
Bos	*Erinaceus*	*Phoca*
Camelus	*Felis*	*Rhinoceros*
Canis	*Hippopotamus*	*Sciurus*
Castor	*Hystrix*	*Simia*
Cervus	*Lepus*	*Sus*
Delphinus	*Mus*	*Talpa*
Elephas	*Mustela*	*Ursus*
		Vespertilio

These Linnaean names (with the exception of *Simia*, which was suppressed in Direction 24, November 1955) will remain in use whatever the outcome of my application. The majority have been placed on the Official List, attributed to Linnaeus (1758): *Balaena*, *Bos*, *Castor*, *Delphinus*, *Erinaceus*, *Hippopotamus*, *Hystrix*, *Phoca*, *Sus*, *Talpa* and *Ursus* in Opinion 75 (January 1922); *Canis*, *Cervus*, *Felis*, *Lepus*, *Mus*, *Mymecophaga* in Opinion 91 (October 1926) (with the type species of all the above placed on the Official List in Direction 22, November 1955); *Vespertilio* in Opinion 91 (and the type species in Direction 98, May 1958); and *Equus* and its type species in Opinion 271 (September 1954).

Names first published by Brisson (1762), and their Linnaean (1758) synonymies given by Merriam (1895), are the following:

Brisson (1762)	**Linnaeus (1758)**
Aries	*Ovis*
Cataphractus	*Dasypus*
Ceratodon	*Monodon*
Cetus	*Physeter*
Hircus	*Capra*
Musaraneus	*Sorex*
Pholidotus	*Manis*
Prosimia	*Lemur*
Tardigradus	*Bradypus*

These synonymies have long been accepted (see also BZN **51**: 332 for *Tardigradus*/*Bradypus*). Brisson's names in this category are not in use and there is no need for Commission action to deal with them individually. Linnaeus's (1758) names *Monodon* and *Ovis* were placed on the Official List in Opinion 75; the names *Bradypus*, *Capra* and *Sorex* in Opinion 91; and *Lemur* in Opinion 122 (January 1931). The type species of all the above were placed on the Official List in Direction 22.

The specific name of *Pholidotus longicaudatus* Brisson, 1762 (p. 19) was used by some authors, in the combination *Manis longicaudata*, for the long tailed pangolin of West Africa (see Meester in Meester & Setzer, 1971, part 4, p. 2). Pocock (1924, p. 722) designated *P. longicaudatus* as the type species of the new genus *Uromanis*, which is currently treated as a synonym (Corbet & Hill, 1991; Schlitter in Wilson & Reeder, 1993) or as a subgenus of *Manis* (Ellerman, Morrison-Scott & Hayman, 1953; Nowak, 1991). Mohr (1961, pp. 9, 10) recorded Brisson's name as invalid and used the name *Manis tetradactyla* (Linnaeus, 1766) for the taxon. The conservation of the specific name *longicaudatus* Brisson, 1762 is not proposed.

Rejection of a non-binominal work by the Commission is for nomenclatural purposes alone and does not imply any criticism of the work or denial of its scientific or historical significance. If the proposal is approved, Brisson's work would not be available for his new names other than those individually conserved, thereby protecting junior synonyms in use, or for nomenclatural acts, but his descriptions would still serve as indications in rendering available names proposed by later authors (Article 12b(1) of the Code). I believe that in the case of Brisson (1762) nomenclatural rejection of the work at the same time as conserving the 11 new names in use will give a clear and unequivocal ruling.

In his comment Dupuis (BZN **52**: 274–275) states that Brisson's new generic names are available from vol. 4 of Chesnaye des Bois's (1759) *Dictionnaire raisonné et universel des animaux*. At the end of this there is a section (pp. 593–636) in which taxonomic arrangements by Linnaeus (various works), Arnault de Nobleville & Salerne (a continuation of Geoffroy, 1741), Klein (1750, 1751), Brisson (1756), d'Argenville (1757) and Adanson (1757) are summarised, without either acceptance or rejection. Chesnaye des Bois (1759, p. v) records: 'J'allois terminer cet Ouvrage par les Tables synoptiques des diverses classes des animaux, suivant les différentes méthodes de Messieurs Linnaeus, Klein & Brisson ... J'ai consulté tous ces Auteurs, ainsi que les autres Ecrivains anciens & modernes, pour enrichir l'Histoire des Animaux'. Brisson's names, among those of many authors, appear throughout the four volumes of the *Dictionnaire* but always only for comparion with the names used for the same taxon by other authors. Neither in the summary (pp. 625–632) of Brisson's (1756) work nor in the *Dictionnaire* itself are Brisson's names adopted as valid. The same is true for the names in the other works mentioned. In his 'Approbation du Censeur Royal' of Chesnay's work, Guettard (p. 639) notes: 'Cet Ouvrage est un abrégé de ce que les Voyageurs & les Naturalistes ont dit fur les Quadrupedes, les Oiseaux, les Poissons, les Insectes, &c. On y trouve de plus les noms que ces animaux portent ou ont porté dans les différens pays où ils vivent'.

Thus, Brisson's (1756) names as they are reproduced in Chesnaye des Bois's (1759) *Dictionnaire* meet the requirements of Articles 11c(i), 11g(i) and 12b(i) for

availability, as noted by Dupuis, but since they are not adopted as valid names for taxa, do not fulfil the conditions of Articles 11d and 11d(ii). They are therefore unavailable from this work. The 11 generic names for which conservation is proposed are first made available in Brisson's (1762) *Regnum Animale*.

I do not agree with Dr M. Wolsan (BZN **52**: 272–273) that some only of the generic names need be attributed to Brisson (1762). I support the view expressed by many previous commentators on this case (for example, W.F.H. Ansell, G.B. Corbet, M.R. Dawson, V. Falbusch, C.P. Groves, K. Heissig, J.E. Hill, D. Kock, H. Mayr, P.A. Morris, F. Petter, G. Rössner, B. Sigé, N. Sivasothi, A. Turner and D.W. Yalden) that, since Brisson was the first authority to recognise and name the 12 taxa, the names for all these genera should be attributed to his authorship. It would be anomalous and inconsistent to adopt his authorship for some but not others of his names. A number of commentators have noted that there is no viable alternative for the name *Tragulus*.

I believe that my application for the conservation of Brisson's 11 generic names in current use, at the same time rejecting the (1762) work, should stand. Of the 51 authors who have so far commented on this application, 43 support this view.

Additional references

Aldrovandi, U. 1645. *Quadrupedibus digitatis viviparis*. 585 pp. Bologna.

Daubenton, L.J.M. 1762. Sur les musaraignes, et en particulier sur une nouvelle espèce de musaraigne qui se trouve en France, et qui n'a pas été remarquée par les naturalistes. *Histoire de l'Académie Royale des Sciences*, **1756**: 203–213.

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